DOCUMENT RESUME

ED 140 605 FL 007 621

AUTHOR Scollon, Ronald
TITLE A Sketch of Kutchin Phonology. Working Papers in Linguistics, Vol. 7, No. 3, May-June, 1975.
INSTITUTION Hawaii Univ., Honolulu. Dept. of Linguistics.
PUB DATE 75
NOTE 72p.

EDRS PRICE MF-$0.83 HC-$3.50 Plus Postage.
DESCRIPTORS *American Indian Languages; *Athapascan Languages; Comparative Analysis; Componential Analysis; Intonation; Language Classification; *Language Research; Morphology (Languages); Phonemics; Phonetics; Phonological Units; *Phonology; Stress (Phonology)
IDENTIFIERS Alaska; Canada; *Kutchin

ABSTRACT

The Kutchins are a group of Athapaskan Indians who live in an area between the East Fork of the Chandalar River in Alaska and the Mackenzie River in Canada. Eight main groups were classified by Osgood (1936) and McKennan (1965) added a ninth group, Chandalar Kutchin. The present study is based on material collected during the summer of 1972 in one of the settlements of Chandalar Kutchin, Arctic Village. It consists of five sections: (1) a phonological study of Kutchin as spoken in Arctic Village that summer; (2) dis ssion of main varieties of Kutchin and comments on the relationship between Kutchin and English; (3) a phonological description of Kutchin; (4) a description of the general historical developments; and (5) a stem list of the forms on which this study is based. (CFM)

****
* Documents acquired by ERIC include many informal unpublished *
* materials not available from other sources. ERIC makes every effort *
* to obtain the best copy available. Nevertheless, items of marginal *
* reproducibility are often encountered and this affects the quality *
* of the microfiche and hardcopy reproductions ERIC makes available *
* via the ERIC Document Reproduction Service (EDRS). EDRS is not *
* responsible for the quality of the original document. Reproductions *
* supplied by EDRS are the best that can be made from the original. *
****

ED140605

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

A SKETCH OF KUTCHIN PHONOLOGY[1]

Ronald Scollon
University of Hawaii

I. Introduction

The Kutchins are a group of Athapaskan Indians who live in an area between the East Fork of the Chandalar River in Alaska and the Mackenzie River in Canada. Eight main groups were classified by Osgood (1936) on the basis of the principal river in their area. They are as follows:

(1) Yukon Flats Kutchin (Kutcha Kutchin)
Birch Creek Kutchin (Tennuth)
Chandalar River Kutchin (Natsit)
Black River Kutchin (Tranjik)
Crow River Kutchin (Vunta)
Upper Porcupine River Kutchin (Tukkuth)
Peel River Kutchin (Tatlit)
Mackenzie Flats Kutchin (Nakotcho)

To this list McKennan (1965) adds a ninth group, the Dihai Kutchin. McKennan prefers Chandalar Kutchin or just simply Chandalar over the term Natsit since it avoids orthographic confusion (nedsɛ, neyetse, netsi, nɛd'si, etc.) The material on which this paper is based was collected during the summer of 1972 in one of the settlements of the Chandalar Kutchin, Arctic Village.

The language, Kutchin, may be formally isolated from the other Northern Athapaskan languages principally on the basis of the palatalization of Proto-Athapaskan (PA) *d series consonants and PA *n which in Kutchin frequently (but not always) are dj and ndj, respectively, when followed by i or the glide y. This results in the name of the group, Kutchin (gwitc'ín/gutc'ín[2], cf. Chipewyan hot'ɨnɛ) and the Kutchin word for person or man (dindjí cf. Chip. dɛne). It has never been established that this formal isolation of Kutchin corresponds to any other isolation, cultural or ecological. McKennan (1965) reports that the Chandalar Kutchin expressed a stronger feeling of group unity than any other Athapaskan group with which he had worked but also he suggests there are factors which are "tending to blur dialectal differences"(p. 15). Krauss has repeatedly said (Krauss 1964b, 1972) that

FL007621

> it is not possible to subclassify the Athapaskan languages meaningfully solely or even largely on the basis of the Stammbaum model, but that Athapaskan must be viewed as a dialect complex with many convergence ('wave') as well as divergence (Stammbaum) relationships." (1972, p. 179)

This paper is a phonological study of Kutchin as it was spoken to me and in my presence in Arctic Village (AV) in the summer of 1972. From this limited point of view there is considerable evidence that Krauss' position is correct. The next section will present a discussion of the main varieties of Kutchin reported to me as well as some comments on the relationship between Kutchin and English. The third section will sketch out a phonological description of Kutchin on the basis of my material. Since both synchronic and historical aspects are relevant to this discussion I have made no attempt to separate these into separate discussions. In the fourth section, however, I will give a summary discussion of some general historical developments. The fifth section is a stem list of the forms on which this study is based.

A number of other ethnologists and linguists have preceded me in working on Kutchin. I have already mentioned Osgood and McKennan. Sapir collected a considerable amount of material in 1923 from John Fredson. This material has been passed on from hand to hand but to my knowledge it has still not reached publication. Richard Mueller has worked for many years in AV and Ft. Yukon but since the emphasis of his work is on producing materials in Kutchin for the use of Kutchin speakers he has not published any descriptive materials for a more general linguistic audience. Krauss is, perhaps, the linguist with the fullest formal understanding of Northern Athapaskan including Kutchin but, again, his other interests, such as his work on Eyak, the still enormous task of comparative coverage of the Alaskan Athapaskan languages, and the very important task of the preservation of the Alaskan languages for the people who speak them, have prevented him from producing any fuller study of Kutchin. Ultimately, it seems that the sociolinguistic questions raised by this study will only be fully understood and answered by a native speaker of Kutchin. It is to be hoped that Athapaskans will replace Athapaskanists in this work.

II.1 Arctic Village

It is difficult to define AV as a community and even more difficult to define it as a speech community. The earlier ethnographic reports of Osgood and McKennan emphasize this difficulty for all Kutchin groups. Nelson (1973) reiterates the individualism of the Kutchins at Chalkyitsik and says

that there were very few people in the village who claimed to be true Tranjik Kutchin. The same was true for AV. All of my informants with only several exceptions were born elsewhere, had lived in a variety of places (Kutchin areas as well as non-Kutchin areas), and reported to be able to talk in other Athapaskan languages without too much trouble. One even said it took only two weeks to pass for Navajo among Navajos in Arizona. It seems clear that a contrast between dialect and language either on the grounds of mutual intelligibility or on the grounds of common residence is difficult to maintain in AV.

The case of John Fredson, Sapir's informant, is an example. Sapir met him in Pennsylvania. Fredson traveled extensively in Alaska with Archdeacon Struck. Krauss calls Fredson "a Ft. Yukon Kutchin" (1972, p. 148); McKennan says Fredson is from Ft. Yukon but born on the East Fork of the Chandalar (which would make him Natsit Kutchin, not Ft. Yukon Kutchin); Osgood says that Fredson was Natsit Kutchin. From reports in AV it is clear that Fredson was a well traveled man who equally impressed whitemen and other Kutchins. The linguistic problem is to decide what geographical and/or social group his speech represented since it is largely Fredson's speech as recorded by Sapir that appears in the literature as Kutchin.

People in AV reported the following varieties of language to me:

(2)

1.	dindjijúkia?	a. di gindjík
		b. gutcá gutc'ín (gwitcá gwitc'ín)
		c. gone language
		d. Old John
		e. "I don't know what kind of talk"
		f. Slavey
		g. Old Crow
		h. Eagle
		i. Tukkuth
2.	vanotɬítkia?	j. English
		k. Indian English
		l. French

There are two main divisions, dindjijúkia? and vanotɬítkia?. These, in turn, seem to have two main subdivisions each. Within dindjijúkia? the two groups gutcá gutc'ín (Ft. Yukon Kutchin, FTYK) and di gindjík ('this' language, Arctic Village Kutchin, AVK) are distinguished by virtually all speakers. Within vanotɬítkia? English (a somewhat 'standard'English, SE) and Indian English (I will call it Arctic Village English, AVE) are distinguished. My general experience in other parts of Alaska leads me to believe that this latter variety might better be called Alaska Native English. It appears to be

widely spoken as the principal means of speaking among Alaskan Natives of differing language and dialect groups. The other varieties listed were mentioned so rarely or in such a specialized context (e.g. Tukkuth Kutchin as the written form of the Bible and other liturgical materials before Mueller's work) that I am not able to make any fuller statement about them.

II.2 Ft. Yukon Kutchin and Arctic Village Kutchin

The distinction between FTYK and AVK is maintained in at least six ways in the phonological system. The most obvious (and perhaps ultimately the only clear and invariable) distinction is in a set of consonants which are reflexes of the PA *dz series. In a number of cases[3] PA *ts and *ts' have become AVK tc and tc' and FTYK k and k'. (Reflexes of PA *dz are difficult to establish.) The list below shows some of these.

(3)	PA initial	AVK	FTYK
'stone'	*ts	tcí	kí
'tongue'	*ts	-tca?	-kia?
'head'	*ts	-tci?	-ki?
'daughter'	*ts	-tcí?	-kí?
'grandchild'	*ts	-tcí	-kí
'mosquito'	*ts'	tc'í	k'í

This variation occurs in a small set of words (perhaps 20) which can mostly be analysed as noun stems. This only applies to reflexes of PA *dz series consonants. PA *g series consonants are unaffected (e.g. 'arrow' *k'a? > AVK k'i?, FTYK k'i?).

A second difference is in the treatment of some vowel-nasal sequences. For example, in AVK the form for 'it is good' is gwį́·zį but in FTYK it is gwínzį. Although Mueller (1964) gives both łąį and łain for'dog' all of my informants gave only łąį́. In my data this variation is limited to a small number of prefixes.

A third difference is in the vowel in a number of words such as 'jackfish' (AVK ʔaltín, FTYK ʔiltín). Again, this is not a general difference but, rather, restricted to a small list of words.

A fourth difference between AVK and FTYK that can be noted is in the tone of some verb stems. Kutchin is a tone language as are some of its Northern Athapaskan neighbors (e.g. Chipewyan). The following list shows several examples of the AVK - FTYK differences.

(4)	AVK	FTYK
'make'	-tsí, {-tsą́ł, {-tsia, -tsi} -tca}	-tsi, {-tsi, {-tsia, -tsą́ł} -tca}[4]
'run'	-gál	-gal
'sit'	-dí, --, día	-di, --, -dia
'drink'	-nį́	-nį

The differences are all in one direction as this list indicates. AVK high tone is FTYK low tone. I have found no examples of the opposite. This variation, again, is limited to some small number of forms.

These differences between AVK and FTYK are the clearest and most noticeable. Mueller (1964) shows a distinction also between y and j (< *x̲) and r and ç or ɽ (<*y) in forms such as the following:

(5)	AVK	FTYK
'mouth'	jik	yik
'ice crystal snow'	tsaihja?	tsaihya?
'sunlight'	drin-?oɽi	drin-?ori

These forms were much more variable with my informants. A single informant frequently gave both forms. Generally, these two distinctions are not maintained between FTYK and AVK with any regularity.

The distinction between FTYK and AVK can be summarized as follows:

(6)	AVK	FTYK
PA *dz series	(dj), tc, tc'	(g), k, k'
Vowel-nasal vowels	ą	vn i
tone	v́	v
PA *x̲	j	y
PA *y	ɽ	r

The question that must now be raised is: what or whom does this distinction between FTYK and AVK characterize? In a general and limited way it is possible to characterize individuals as speakers of FTYK or AVK. This distinction, however, often appears to be more a question of attitude toward the varieties than actual use. One speaker of FTYK said that he could not understand why another person (whom he referred to by name) said tc' and tc when k' and k are so much <u>easier</u> to say. That person said, in turn, that tc' and tc are much <u>clearer</u> than k' and k . In conversation with each other these two speakers freely use their own varieties without any apparent loss of intelligibility and, perhaps more important, without animosity.

The attitudes of the two groups toward my pronunciation of Kutchin varied. Those who thought of themselves as speakers of AVK tolerated much variation without attempts at correction while speakers of FTYK tended to insist that I get it right. At the same time it was speakers of AVK who took the greatest interest in drawing me into the Kutchin speaking community.

In several cases speakers' attitudes toward the FTYK-AVK distinction as well as their knowledge about it came to light in conversations which I had taperecorded. In the first of these an elderly couple (speakers of AVK) were visiting us. Early in the visit we were eating fish. I referred to it as ʔiltín (FTYK 'jackfish, pike'). The woman said ʔaltín to herself (AVK form). Later an interesting dialogue took place between the woman and me.

(7) (W=woman, M=me)
W: ʔiltín vandaí? ('Do you know [the word] ʔiltín?')
M: (no answer)
W: ʔaltín, yeah, van--you know?
M: Yeah.
W: You know?
M: Yeah.
W: ʔeltín'
M: ʔąhą?. (Kutchin =yeah)
W: ʔą. ʔaltín.

Notice in this dialogue that W first uses the FTYK form of the word in speaking to me. This is either because she is aware that I used this form earlier or because she assumes that someone would learn the FTYK form first. When she gets no answer she switches to the AVK ʔaltín. When I say 'yeah' in answer she doesn't acknowledge this as an answer. (Note her own use of 'yeah'--that is, she certainly knows this word). It is only after I switch to the Kutchin ʔąhą? that she accepts that we are conversing. Then she makes her point which is that ʔiltín should be pronounced ʔaltín. Following this dialogue the couple talked to each other about the two variant forms but I cannot follow that conversation. It seems clear in this case that W is trying to get me to speak Kutchin and preferably AVK.

In another situation I was speaking with a group that included one elderly speaker of AVK, one young speaker of FTYK, and a group of children under 10 years of age. I was 'officially' learning words from the speaker of AVK but the others were all 'helping'. I asked for the Kutchin word for 'narrow'. The older man (OM) gave tc'í. A child said k'í (correcting the initial tc'to k'. A second voice said k'i

(correcting the tone) and then OM said k'iʔ as his 'final' form and the young man (YM) confirmed with k'iʔ but noted that instead of giving me 'narrow' they had given me 'arrow'.

A few minutes later I asked for 'below'. OM gave tc'íjak. YM again corrected the initial to k'íjak. In this case, however, OM stuck to his original form contending that tc'íjak is di gindjík whereas k'íjak is gutcá gutc'ín.

What is interesting about these two cases is that in both cases OM first gives tc' and the others correct to k'. In one case OM accepts the correction but in the other he argues that there is a dialect difference. The initial consonant in the first case ('arrow' k'iʔ) can be shown to be the reflex of PA *k'. In the second case tc' and k' are the reflexes of PA *ts'. By his willingness to accept correction in the one case but not the other OM indicates some kind of awareness of this historical distinction between the consonants.

In the third case I will cite, I was trying to elicit the perfective stem of the verb 'to make' from a speaker of AVK. We went over it a number of times. Each time he gave me -tsą́ as the form of the stem. When I switched on a second tape recorder to record this form he gave -tsí as the stem. I was surprised and asked what -tsą́ was. He reported -tsą́ to be the FTYK form--that they really meant the same thing.

This case is particularly interesting since another informant who regards himself as a speaker of FTYK in giving this same form rehearsed -tsi a number of times. When I switched on the second tape recorder he then gave -tsąi as the correct form. In this case the informant didn't characterize the difference between -tsi and -tsąi but just said they were the same. (A summary of these forms is given in (4) above).

In both cases the speakers show a vacillation between forms with one showing up in a somewhat more pressured situation. Notice that the speaker of AVK claims that one of the two variant forms belongs to FTYK but the speaker of FTYK does not refer to the AVK forms according to any dialect distinction. Since the speakers of AVK are all older residents of AV this may indicate that they are conscious of a time when the AVK/FTYK distinction was actually a geographical dialect difference. Speakers of FTYK (younger people and older people who have come from

Venetie or Ft. Yukon) seem to be less conscious of this difference but only regard AVK as different for some inexplicable reason. Since these latter are in the majority among Chandalar Kutchins this attitude is not surprising.

Since I have said that younger people are speakers of FTYK I should point out further that children make a wide variety of mistakes (e.g. the perfective stem of 'make' -tsę, or tone differences) which the adults assume they will overcome with age. This raises the general question of whether the speakers of AVK who are elderly people expect the younger people of AV to become speakers of AVK when they too become elders. This seems unlikely since one of my informants was of the same generation as the speakers of AVK but spoke FTYK. Since this man was somewhat of an outsider in the village, however, it might be argued that it is age taken together with prestige (status of village elder) that admits one to AVK. This might be refuted by the case of OM quoted above who was of the right age but apparently did not have the status of a village leader. It is further refuted by the fact that these same elders made frequent attempts to get me to speak AVK. If AVK were assumed to be the natural outcome of a life of speaking FTYK then they would not have worked at teaching me.

Perhaps it is clear by now that the distinction between FTYK and AVK does not represent a simple geographical dialect division to people in AV. Although all speakers tend to preserve the distinction in their own speech their attitudes toward this distinction vary. It would take a sociolinguistic study of much greater depth to approach an understanding of just what kind of a distinction this represents. For now I can only suggest that the use of AVK represents a preservation of an older form of speech in a few limited areas of the language and that this preservation is associated for at least some speakers with religious activity in AV. As I will show below the tc (< *ts) in AVK appears to be related to the same development in Tukkuth and Peel River Kutchin. I suggest that this PA development has been retained in AVK as a result of the introduction to AV of the Bible and other church materials in the Tukkuth Kutchin translations of Archdeacon MacDonald. The distinction between AVK and FTYK appears to be quite similar to that maintained in some Protestant sects by the use of the older forms 'thee' and 'thou' in religious contexts.

8

9

II.3 Kutchin and English in Arctic Village

A view of AV that only looks at the distinction between FTYK and AVK would still be somewhat too simple. Kutchin (of both varieties) and English are in a complex relationship in actual use. It is frequently difficult to decide if a particular utterance is in one language or the other. One finds English words 'borrowed' into Kutchin sentences in Kutchin discourses as follows:

(8) a. XXX dindjí nekwę́ or thrée dindjí XXX (XXX represents conversation in Kutchin which I cannot follow).
b. eight o'clock airplane-ą dagóndji ?ą? ('Has the eight o'clock airplane left yet?'
c. tape recorder t'open hendrá?(Is the tape recorder on?)

Or one finds Kutchin used in the context of English discourse as in "vanotłít he like it inside house." ('Whitemen like to stay in the house.')

Perhaps the clearest expression of this pervasive overlap between the languages was given when I asked an older person how to answer the question vadzaí konlį́? ('Are there any [a lot of] caribou?') He told me that the correct negative answer was vadzaikwá ('There are no caribou.') Later in another setting I used this answer to the same question (an important and frequent question in late summer in AV). That person said my answer told him that I was not a native speaker (his words) of Kutchin. I asked what was correct and he said no? was correct. Notice that he claims that the borrowed English form (with ? final) is the correct Kutchin form. Later the person who originally gave me the form vadzaikwá was recorded in conversation with his wife--all of it in AVK. He regularly used no? as the negative.

The conclusion that I draw is that the first person gave me vadzaikwá on the basis of the normative categories of Kutchin (pure) versus English (pure) not on the basis of the way he actually speaks. The second person caught the problem. Although I cannot be certain, I feel that these normative categories were, in fact, my categories--categories that I had suggested through my persistent attempts at first to elicit a homogeneous variety of Kutchin for my linguistic work. The evidence I have that this is so has to do with questions of both use and attitude. One of the elders in the village claimed that the only reason the "old people" didn't borrow words was because they didn't know them. They called borrowed cultural items by Kutchin terms only as long as they were ignorant of the "right name".

The attitude toward borrowing expressed by this person about language agrees with Nelson's (1973) description of the people of Chalkytsik who lack any interest in the old ways and prefer to borrow wherever possible. On the other hand it runs directly contrary to Sapir's (1921) statement that

> the Athabaskan languages of America are spoken by peoples that have had astonishingly varied cultural contacts, yet nowhere do we find that an Athabaskan dialect has borrowed at all freely from a neighboring language. (p. 196)

There is also a footnote which says rather than "freely"that "one might all but say 'has borrowed at all'". At least in AV there is evidence of frequent borrowing and if the older people did not borrow it is said that it was only from lack of opportunity, not from any basic psychological prejudice against borrowing.

II.4 Children's Language in AV

To close this section on language use in AV it is important to mention two aspects which may be of considerable importance in determining the future uses of language. I was interested in studying the acquisition of Kutchin, particularly the very earliest stages, for comparison with my work done with a child learning Hawaiian English (Scollon 1974). I found this impossible because the mother of the only one year old child in AV reported that they spoke to the child only in English. I had a fair opportunity to observe this in a variety of settings both with this child and with other children somewhat older. In general, English (AVE) forms a kind of baby talk register which is used in speaking to children under about four years of age. It is quite like other baby talk registers reported (e.g. Ferguson 1964) in that it is widely but not exclusively used in speech to the child. It is clear that it is preferred to Kutchin because some of the more conservative speakers of AVK were observed to use English--even in the face of claiming to me that they could not speak any English. One person after a session in which he claimed to have no knowledge of the English conjunction and, and even went so far as to say that it was ridiculous for a language to have such a word, said to his grandchild (three years of age) "You and me go home."

So far this use of English is restricted to a baby talk register. Children around four were observed to listen intently to conversations in Kutchin but when they asked questions in Kutchin they were answered in English. Older children speak and are answered in Kutchin.

These statements, however, must be considered tentative and possibly obsolete. A statewide bilingual education program was in preparation during the summer of 1972 while I was in AV. This program was to be instituted in AV in the fall of that year. It is to be expected that the institution of formal education in Kutchin will strongly affect patterns of usage in AV. The description of these patterns must be left to linguists who are in closer contact with AV.

III. A phonological description

The study presented here is based almost entirely on my own work in the summer of 1972. I used Mueller's dictionary (1964) in some of my early elicitation and with the exception of tone and vowel length have largely agreed with the forms he gives. Since I have relied heavily on tape recorded material for this study, however, I have not used entries from his dictionary that I did not also elicit from my informants. My access to Sapir's material has been limited to a dozen pages of notes copied from Sapir's originals by Fang-Kuei Li. I received these after doing the bulk of this analysis and so that material was not used to any extent in preparing this study.

My purpose in stressing the independence of my work is that I feel that if what I do is to have any significance it will be as an independent source of information and analysis. It is clear from what I have seen of Sapir's notes that in certain critical areas he had arrived at essentially the same analysis. On the other hand, because of the complex situation in AV it is possible that a number of the conclusions I have drawn will have to be altered in the perspective of the wider knowledge of Kutchin of those who have worked in this area much longer than I have.

III.1 Order of presentation

This section gives a discussion of the analysis that led to the current form of the word/stem list in section V. This analysis begins as a synchronic study but ultimately introduces historical-comparative material for consideration. This study consists of twelve sections as follows:

III.2 Nasals
III.3 Dentals and alveolar affricates
III.4 Interdental stops
III.5 Dental affricates
III.6 Retroflex affricates
III.7 Velar stops

III.8 Laterals, glottal stop, and v
III.9 Fricatives
III.10 Final consonants
III.11 Vowels
III.12 Tone
III.13 Phonology of loan words

(A list of the segment symbols used throughout this discussion is given at the beginning of section V, the word/stem list.)

Phonological studies in Athapaskan languages have generally been restricted to the initial consonants of verb stems. These are more conservative and internally consistent than prefix consonants and much more conservative than final consonants--many of which have been lost. In this discussion I treat these stem consonants first but I have then expanded the analysis to consonants in other positions. Because there are fewer nasals than other stop consonants I begin with them.

III.2 Nasals

There are four nasal consonants, [m], [n], [ŋ], and [ñ], nasal vowels, and sequences of [n] followed by many of the other consonants. [m] occurs in very few words, all but -maʔ 'breast, milk' clearly borrowed into the language. [ŋ] always and only occurs before velar stops and can be assumed to be a phonetically conditioned variant of /n/. [m], [ñ],[5] and [ŋ] are not of major importance in this discussion.

There are two sequences which, because of the prevailing consonant-vowel syllable structure and because of morphological evidence, behave as single segments rather than sequences. These are [nd] and [ndj], for example, 'island' ndjú, 'lips' ndéva, 'I know' gacíndai (ga-, verb theme, ce-, 1st person singular disjunctive subjective prefix, -ndai, 'to know', imperfective stem. Note: it is not n + -dai, -n-, 2nd person singular subjective prefix.)

The distribution of [nd] and [ndj] is as follows:

(9) ndj/__{i, u, ia}

(10) nd/__{e, ai, ak}

Since u is phonetically [iu], this distribution indicates that [ndj] is a palatalized variant of /nd/.

A relationship between nd and n can also be established as the following examples illustrate:

(11) 'drink' -nɨ́, -nɨ?, -ndja
'sharp' -nin
'lift' -ndji
'pull' -ndak

Comparing these with the environments in (9) and (10) above it can be shown that [nd] and [ndj] are found in non-nasal environments as in (12),

(12) $\left\{\begin{matrix}nd\\ndj\end{matrix}\right\}$ / __ V (C)
[-nasal][-nasal]

but [n] is found as in (13).

(13) n / $\left\{\begin{matrix}\_\_\ V\\ [+nasal]\end{matrix}\right.$ $\left.\begin{matrix}V\ \_\_\\ C\\ [+nasal]\end{matrix}\right\}$

As I will argue below, there is reason to think that surface nasal vowels are the result of an underlying vowel-nasal sequence. If this is so then (9), (10), (12), and (13) could be summarized as in (14).

(14) /n/ → ndj / __ $\begin{bmatrix}+palatal\\-nasal\end{bmatrix}$

nd / $\begin{bmatrix}-palatal\\-nasal\end{bmatrix}$

n / [+nasal]

The two processes, palatalization and denasalization interact so that /n/ must be denasalized to nd in order to undergo palatalization. These processes are quite general. I find no exceptions among the stem initial consonants. Prefixes, however, present problems. For example the 2nd. person singular and plural subjective prefixes are, respectively, né-,and nohó-, not *ndé-, and*ndohó- as the rules above would predict. Some words of the other classes have initial consonants of both types, e.g. 'island' ndjú but 'salmonberry' nákal not *ndákal, and 'long time' níyuk not *ndjíyuk. The implication, of course, is that, at least for prefixes and nouns there is a contrast between /nd/ and /n/.

If an underlying contrast between /nd/ and /n/ is accepted for stems as well, then the analysis above would be incorrect. 'drink' -nį́, -nį?, -ndja as analysed above would be /nín/, /nin?/, /nia/ with denasalization and palatalization applying to give the surface forms. If the contrast between /nd/ and /n/ is accepted, then 'drink' would be /nín/, /nin?/, /ndia/ with only the palatalization process needed to give the surface forms.

This suggests that /n/ plus the two processes of denasalization and palatalization represent an earlier stage. The contrast between /n/ and /nd/ amounts to denasalization having been a deep process which is represented by a contrast in underlying segments. To anticipate some later points, we can see that an even later stage would be to represent both denasalization and palatalization in the underlying forms with /n/, /nd/, and /ndj/ all contrasting.

One set of forms illustrates these processes quite well. For the verb, 'to say' two informants gave me different forms. One speaks mainly AVK and the other speaks mainly FTYK. This material suggests that AVK is the more conservative of the two varieties.

(15) 'to say' -nią́, -nią, -nią? (AVK)
-ndja, -nę, -ndja? (FTYK)

Two solutions can be offered for these differences. The first solution would assume that denasalization and palatalization were surface processes. The derivation of the imperfective would be as follows:

(16)

'to say'	AVK /nián/	FTYK /nia/	
	nián	ndia	denasalization
	nián	ndja	palatalization
	nią́	ndja	vowel nasalization and final consonant loss

In this solution both speakers are assumed to have /n/ as the initial consonant. They differ only in the presence of vowel nasalization--represented by an underlying vowel-nasal sequence. Denasalization is taken to be a surface process.

A second solution is as follows:

(17)

'to say'	AVK /nián/	FTYK /ndia/	
	nián	ndja	palatalization
	nią́	ndja	vowel nasalization and final consonant loss

This solution takes the denasalization to be encoded in the underlying contrast between /n/ and /nd/.

Considering only the nasals there appears to be no way to decide which is the correct solution. Tentatively, I suggest that (17) is correct and that denasalization of /n/ to /nd/ took place in the past and that these segments contrast in their underlying forms.

In final position there is only one nasal segment, n. There are also nasal vowels in all positions which I suggest result from an underlying vowel-nasal sequence. Stems such as 'hold'-tą and 'teach'(pl.) -tan allow at least three solutions, as follows:

(18)

	'hold'	'teach'
a.	/tą/	/tan/
b.	/taN/	/tan/
c.	/tan/	/tane/

The first (a) assumes underlying nasal vowels, the second (b) assumes some underlying 'nasalizing'nasal consonant (which never appears on the surface) contrasting with /n/, and the third (c) assumes that /n/ before a word boundary would nasalize the preceding vowel. This solution also assumes that a final vowel or nasal would then be deleted.

There are a number of cases in which nasal vowels are clearly the result of a vowel-nasal sequence in casual speech. For example, one informant gave both gwinézį and gwį́·zį for 'to be good'. In other cases this nasalization is a regular morphological process. The second person singular subjective prefix, -n- results in the nasalization of the preceding vowel, for example, 'he sits' ɔ́ídi, 'you sit' ɔ́índi but 'he makes' ʔátsi, 'you make' ʔą́tsi. These examples indicate that the third solution above (18c.) is correct. The conditions under which /n/ nasalizes the preceding vowel have to be expanded somewhat, however. This process takes place before word boundaries, before some consonants (e.g. dz series consonants), in casual speech, and in some morphological processes. I have intentionally left these environments vague because their full specification will depend on a fuller discussion of morphological processes which I have not yet undertaken. In general it can be said that there is an overall tendency toward an open syllable structure of consonant - vowel, and toward stems of a single syllable. These processes taken together give more strength to the solution (18c.) which assumes surface nasals result from underlying vowel - nasal sequences.

To conclude this discussion of nasal vowels and final nasals it will be useful to look at some comparative evidence. The following Chipewyan forms are from Li (1933a).

(19)	Kutchin	Chipewyan
'mother'	-ʔę́	-ʔę
'grandmother'	-tsų́	-tsų́nɛ́
'hold'	-tę	-tún, -tún
'teach (pl.)'	-tan	-tan, -ta
'teach (sg.)'	-tan	-tę́
'trail'	-tęį	-tane
'be Class II object'	-tin	-tę
'father'	-tį	-tę
'people'	-tc'ín	-t'įnɛ

These forms indicate that all of the possible correspondences of a vowel-nasal sequence or a nasalized vowel occur between Kutchin and Chipewyan, except that Kutchin does not have any final vowels following a nasal consonant. Although these few examples are insufficient for a reconstruction of the historical forms they do indicate that it is not unreasonable to consider the nasalization of vowels from underlying vowel-nasal sequences and the surface vowel-nasal sequences to come from underlying vowel-nasal-vowel sequences.

As a tentative summary I suggest that the surface nasals [m], [n], [ŋ], and [ñ], surface nasal vowels, and vowel-nasal sequences result from the following underlying nasals: /m/, /n/, /nd/, /VnV/, and /Vn/.

III.3 Dentals and alveolar affricates

The palatalization of /nd/ to ndj suggests that the same thing might happen with the dental series stops, d, t, and t'. For this reason in this section I will be looking at the pairs, d/dj, t/tc, and t'/tc' in that order.

The first pair is illustrated by the following list:

(20)		
'heavy'	-dí, -di	
'sit'	-di, -di?	
'go, be'	-di, -dí, -día	
'choke'	-dak	x
'fear'	-dját	
'old, worn'	-djat	
'four'	dǫ	x
prefixes	di-, de-, da-	x
'this'	djí	x
'horn'	tcídji?	x
'new'	-djit	x
'buy'	-djik	x
'vomit'	-djú	x
'come'	-dík	

For the forms marked with (x) the following rule could be assumed

(21) /d/ → dj/__[+palatal]
d /elsewhere

A number of forms do not undergo this rule, however. That is, some /d/'s do not palatalize and somedj's are found in non-palatal environments. There are several ways to try to resolve this difficulty. Comparative evidence shows that those cases of dj which precede non-palatals are reflexes of PA *g^y. This would not account, however, for the d's which appear on the surface before palatals. In this case there is no final nasal to appeal to as in the case of the nasal initials. An alternative would be to posit [-palatal] underlying vowels in these cases. As I will show later the comparative evidence indicates that forms such as 'to sit' -di < PA *da.

As far as a synchronic description is concerned it is difficult to argue for the rule expressed in (21) above. The simplest solution is to assume a contrast between /d/ and /dj/. Of course, if this description is accepted here, it implies that the palatalization process is an historical development. This would lead to reanalysing the nasals as /nd/ contrasting with /ndj/ as well as with /n/ for the sake of the consistency of the description.

In the case of the aspirated pair t/tc things are more complicated as the following list indicates:

(22) 'hold'	-tą	x
'freeze'	-tan	x
'smooth'	-tą́	x
'be Class II object'	-tin	x
'thick'	-tį́	
'find out'	-tia	
'sleep'	-tcį́	x
'put Class III object'	-tci?	x
'count'	-tcá	x
'tie'	-tca	x
'big'	-tcó	
'water'	tcu	x
'stone'	tcí/kí	
'tongue'	tca?/kia?	
'wood'	datcán	

A rule parallel to (21) above would work for the cases marked (x). This rule is (23).

(23) /t/ → tc/__[+palatal]
t /elsewhere

This requires, however, a different a in 'hold' -tą from that in 'count' -tcá. It is also difficult to explain 'find out' -tia. In many cases there is a contrast between /a/ and /ia/. This distinction is neutralized on the surface following the dj series consonants. A rather large group of these forms (e.g. 'he'Class II object, -tin) behaves like the nasals. That is, the final nasal appears to be blocking palatalization. Unfortunately, there are counterexamples (e.g. 'sleep' -tcį). Again, there are cases where tc occurs before non-palatals (e.g. 'big' -tcó, 'wood' datcán). As with dj these cases can be shown to be reflexes of PA *kʸ.

In addition to these problems there are a number of nouns and at least one prefix for which tc alternates with k (and to anticipate the next section tc' alternates with k'). This small set of words has been discussed above (II.2) as characterizing the AVK/FTYK difference. Comparative evidence shows that this tc/k (tc'/k') distinction only occurs for noun initials and prefixes but not for verb stems initials and for these only for tc < PA *ts (tc' < *ts'). This indicates that either speakers know in some way the history of these segments or the list is memorized. I suggested in II.2 that at least one speaker, OM, appeared to be aware of this history. Of course, it is possible that different speakers process this distinction in different ways.

Since tc comes from at least three different PA sources, (i.e. t/__[+palatal], tc < *kʸ, and tc < *ts) rule (23) above would obscure this history--which in the case of tc < *ts appears to be important in preserving the AVK/FTYK distinction, and it would require using the process of nasalization to block palatalization. This latter process seems, at least for the nasals to be demonstrably historical. For these reasons it seems best to consider (23) an historical process which is now represented by an underlying contrast between /t/ and /tc/. The case of tc < *ts will be taken up again later (III.4).

The glottalized pair t'/tc' has already been mentioned. The following list gives more examples:

(24)	'cut'	-t'í	
	'feather'	-t'e	x
	'hit'	-t'án	x
	'wrap up'	-t'o	x
	'butcher'	-t'ú	
	'people'	-tc'ín	x
	'live'	-tc'i	x
	'below'	tc'íjak/k'íjak	
	'sinew'	tc'i/k'i	
	'mosquito'	tc'í/k'í	

As in the case of the other consonants I have discussed, a palatalization process seems to be occurring or to have occurred in the past. These glottalized consonants only show two exceptions to this general process, 'cut' -t'i and 'butcher' -t'u. Except for these rule (25) would work in every case, including the tc' < *ts'.

(25) t' → tc'/__[+palatal]
t'/ elsewhere

Unfortunately, there is no ready explanation for the two exceptional cases. Furthermore, speakers do not appear to be deriving tc' from /t'/ in the case of tc' < *ts'. Again, the best solution seems to be to consider /t'/ and /tc'/ as contrasting in underlying form.

One further note on t' should be made here. In some cases these result from a coalescence of the D classifier and a stem initial glottal stop, e.g. 'come past' -t'al (< /d - ʔal/). I have treated these separately under -ʔ.

III.3.1 Summary

For nasals in stem initial position the interaction of denasalization as an underlying process and palatalization worked to produce /n/ in contrast with /nd/. For t' and tc' the palatalization process also appears to be quite general although it obscures historical developments. For the aspirated and unaspirated consonants, d/dj and t/tc, however, there seems to be no choice but to assume the underlying contrasts /d/ with /dj/ and /t/ with /tc/. Since this solution does not make any problems with either nasals or glottalized consonants it seems best to consider the palatalization process an historical development which is reflected in these underlying contrasts.

III.4 Interdental stops

There are relatively few examples of the interdental stops, dð, tθ, and tθ'. The following examples illustrate these stops.

(26)	'sand'	dðák
	'throw Class I'	-tθak
	'all'	-tθak
	'pierce'	-tθai
	'hear, understand'	-tθ'ak, -k'į, -tθ'ák
	'scrape'	-tθ'ai

The first thing to be noticed is that there are no instances of dð, tθ, or tθ' before a [+palatal] segment. The perfective of 'to hear'suggests rule (27).

(27) /tθ'/ → k'/__ [+palatal]

If this is the case then at least some of the occurrences of g, k, and k' in this [+palatal] environment might be expected to be the result of this or a similar rule. The set of nouns and prefixes mentioned above in connection with the dj series consonants are of this type. The following list gives some examples along with the corresponding forms from Chipewyan (Li 1933a).

(28)	FTYK	AVK	Chip
'stone'	kí	tcí	tθɛ
'head'	ki?	tci?	tθí
'tongue'	kia?	tca?	tθu
'sinew'	k'i	tc'i	tθ'ɛ́
'mosquito'	k'í	tc'í	--
'hear'(Imp.)	-tθ'ak	-tθ'ak	-tθ'aɣ
'hear'(Perf.)	-k'i̱	-k'i̱	-tθ'a̱
'hear'(Fut.)	-tθ'ák	-tθ'ak	-tθ'a̱

On the evidence of the perfective stem -k'i̱ we can see that rule (27) above is supported for verb stems in both FTYK and AVK varieties and for all cases in the FTYK variety. This, then, leaves the problem of accounting for the small group in which PA *dz series consonants have dj series reflexes in AVK.

There are three ways this split may have developed. AVK could have a rule like (29). (g will be used to represent the full series of stops).

(29) g(< *dz) → dj (for nouns and prefixes)

A fuller representation of the same thing would be (30):

(30) /dδ/ → g/__[+palatal][+verb]
dj/__[+palatal][-verb]
dδ/ elsewhere

A third explanation would assume that all of these forms were simply memorized.

There are several things which have to be considered in making an explanation of this development. I pointed out above that there is a general awareness on the part of all speakers of these differences. Either they have memorized the list or have access to the history of the segments. The fact that a young child was able to correct an older speaker on his 'mistake' may indicate that rather than working from a memorized list it is done by rule. Informants who speak FTYK refer to their variety--specifically in reference to the

k/tc split--as 'easier'. Speakers of AVK refer to their variety as 'clearer'. The FTYK side of the split results in k and k' (<*ts and *ts') merging with k and k' (<*k and *k'). On the AVK side the resulting merger produces dj series consonants. Because of the palatalization mentioned above there is already an abundance of dj series consonants in the language. Perhaps it is, in one way, easier for these cases to be g series consonants since that would tend to reduce homophony, whereas the AVK dj series consonants would tend to increase homophony.

It remains to be seen in what way the AVK dj series merger is 'clearer'. If we suppose (I think it is correct) that AVK represents a somewhat more conservative variety, then we can assume that the historical development was as follows:

(31) *dz > dj/ _[+palatal]
dð/ elsewhere

This was followed at a later time by

(32) dj > g/__[+palatal]

To account for the retention of a small number of cases where the second process does not apply we can consider that AV began as a settlement when Albert Tritt led a group of people away from Ft. Yukon. The movement was both a religious movement (Tritt had been converted to the Episcopal religion) and a nativistic movement. According to McKennan (1965) the English that Albert Tritt spoke in 1933 was King James English--since the King James Bible had been the source of his education in that language. He learned English by comparing his Tukkuth translation with the King James. In this context it is not surprising to find a small number of forms--nouns and prefixes which do not undergo extensive morphological alternations as the verb stems often do--which preserve an archaic form of the language. It is strikingly similar to the use of the King James English forms, 'thee' or 'thou'in current Standard English protestant services. Further, my main two informants who gave these AVK forms are, in fact, priests in the Episcopal church. These forms are not used exclusively by them but there does seem to be an association of AVK with the elder status of these speakers.

The following material gives further support for this interpretation. Dyen and Aberle (1974) give two kinship terms (their terms 51 and 52) for several of the Kutchin

groups. I have reproduced these here with several changes. The AVK and FTYK forms are from my own material. I have checked Fredson's forms in Dyen and Aberle, Osgood (1936) and in Li's copy of Sapir's original notes. The Peel River Kutchin forms are from Osgood (1936). Tukkuth Kutchin forms are from Morgan (1871). The term I list for 52 disagrees with Dyen and Aberle's listing but it is the form Morgan gives. It is inexplicable to me why Dyen and Aberle give any other form. The Liard form is from Osgood but he claims to have no knowledge of what group of Kutchins this represents. Since the Tukkuth forms were from Peel River Fort they may be the same as Osgood's Peel River.

(33)D and A	PA	AVK	FTYK	Fredson	PR	Tukkuth	Liard
51	*-tse?	-tcí?	-kí?	-kí?	-tci	-tshere	{-che, ché}
52	*-tsweye	-tcí	-kí	-kʸoi	-tci'	-tshe	-tci'

From this it can be seen that there is an apparent relationship between Tukkuth Kutchin and the AVK forms. Since the forms given by Morgan were collected by McDonald in 1865 we must consider these forms as potentially more conservative. Of course, this is what the current usage of AVK suggests as well.

It seems best, then, to regard the rules given in (31) and (32) as the historical development. As the first stage of this development PA *dz > dð. This development is shared by other languages such as Chipewyan. The second stage, which appears to be a Kutchin development, is the palatalization of dð to dj. Then as a third stage dj (<*dz) > g. Since speakers of FTYK treat all of their forms by this last rule they may claim it is easier. On the other hand speakers of AVK may feel their variety is clearer since it preserves an earlier stage of the language in at least some part.

III.5 Dental affricates

Here I will mention a few points about the dental affricates dz, ts, and ts', and then return to them later. A look through the stem list reveals a surprising number of dz series consonants in the [+palatal] environment. Because of the amount of palatalization noticed above with other consonants, one suspects that at least some of these may be the result of palatalization. Recall that in the discussion of the d/dj consonants there were a number of cases of dj<*gʸ in a non-palatal environment. The palatalized alternates of those show up here in the dz series. A few examples will illustrate:

(34)

		PA Initial
'fear'	-dját	*g^y
'old'	-djat	*g^y
'tie'	-tca	*k^y
'big'	-tcó	*k^y
'tear'	-tc'á	*k^y'
'mink'	tcidzu	*g^y
'handle Class II'	-tsin	*k^y
'narrow'	-ts'ík	*k^y'

These forms suggest the historical rule (35).

(35) *g^y > dz/__[+palatal]
dj/ elsewhere

Although this rule, if taken as a synchronic rule, would eliminate some of the exceptions found in the d/dj list there is no combination of synchronic rules which would take care of all the exceptions. For this reason it seems better to consider this a process of palatalization that happened somewhere in the development between Proto-Athapaskan and the present.

For the dental affricates, then, we can assume the underlying segments, /dz/, /ts/, and /ts'/ to directly underlie the surface segments.

III.6 Retroflex series consonants

The consonants of this series, dr; tr, and tr' have long been a source of difficulty in comparative studies. Two reconstructions have been suggested. Sapir's reconstruction which was never actually published as such is reflected in the reconstructions of Li (1933b) and Hoijer (1960). This reconstruction gives PA *dj but Krauss (1964a) reconstructs a separate series *g^w. To anticipate the later discussion of historical developments, the three sets of developments, *dz > dð, *dj > dz, and *g^y > dj can be seen to be the result of a general forwarding of the tongue position. In this context Krauss' *g^w series resulting in dr seems to fit. It is difficult to explain, however, why Chipewyan which also has this general forwarding of all these stops does not also have the retroflex series. I will take up this problem later in the historical discussion. For now I want to suggest simply that synchronically at least /ts/ and /tr/ are in contrast.

There are several forms which suggest this contrast.

(36)

'smell'	-tsin
'excrement'	-trin?
'beaver'	tse
'cry'	-tré

Obviously, these are not exact minimal pairs. They are the closest that are available, however.

A number of forms such as the first two in (37) indicate that there may be some relation between the palatal environment and the retroflex series.

(37) 'muskrat' dzán
'day' drín
'canoe' tr'í
'spruce' ts'ívi

The second two forms, however, make it difficult to maintain this relationship for the whole series. To summarize, dr is always found in the pre-palatal environment, tr is mostly but not always found before palatals, and tr' is only sometimes found before palatals.

Because of the difficult of stating the environments which would produce the dr series from the dz series consonants synchronically, I feel it is best to consider /dr/, /tr/, and /tr'/ to be in contrast with /dz/, /ts/, and /ts'/, respectively.

III.7 Velar stops

In the word list two velar stops have been written in both a labialized and a non-labialized form, i.e. g/gw and k/kw. k' occurs only in the non-labialized form. In the elicitation of these forms, in some cases one was given but not the other. In a few cases, however, an informant repeated the word several times. It is these repetitions that will serve as an introduction. In one case three informants gave the following six forms.

(38) 'to lift' dagoíndji
dagwíndji

dagwoóndji
dagʷóndji

dagwəndji
daywəndji

The symbol (ʷ) indicates a slight labialization. It is because of variation of this type that I have analyzed all surface gw as /go/ with the following rule:

(39) /g/ → gw/__o

A second example will illustrate further. One informant gave these two forms for the word 'five':

(40) 'five' ʔiɬakwǿnliʔ
ʔiɬónliʔ

In the analysis of vowels, I have written [ə] as a in closed syllables. Yet here, because of the o in the second form it seems clear that the underlying form must have /o/, i.e. /ʔiɬakónliʔ/. This would require a rule similar to (39) and a further rule which reduces o to ə before n.

(41) /k/ → kw/__o

o → ə /__n

The result of this analysis is that a word like 'dirt house', 'camp' [kwǿnʔ] would be analysed as /kón/ assuming the rules of (41).

The prefix for 'weather', 'people', 'place' occurs in both gw and g forms. The following examples suggest that the best analysis is /go/.

(42) 'to be good (weather, person, place)' gwɣ́·zɣ
'trail, road' tɣ gundjík/tɣ gwǐndjík
'dirty' goaɣ́/gwa·ɣ
'Ft. Yukon Flats' gutca/gwitca
'people' gutc'ín/gwitc'ín
'meadow' goɣcí/gwɣ·cí

As these examples show, the labialized gw does not contrast with g.

On the basis of the examples that have been given I feel that rules (39) and (41) are supported as the best analysis. There are several troublesome cases, however, in which k appears to contrast with kw. For example, pairs like 'sew' -kai and 'vomit'-kwai seems to show this contrast. The following list gives some of these forms as well as the Chipewyan forms (Li 1933a) for comparison.

(43)

	Kutchin	Chipewyan
'not'	-kwa	--
'paddle canoe'	-kwa	-kaíh, -kɣ́,-keɬ
'two'	-kwɣ́	-kɛ
'feet'	-kwaiʔ	kɛ, -kɛ́
'vomit'	-kwai	-kui
'mound, heap'	-kwai	kɣ
'sew'	-kai	-kaih, -ká, -kaih
'handle Class IV'	-kai	-kaíh, -kɣ, -kaɬ etc.

A number of solutions can be suggested. First we could assume a contrast between k and kw. Of course, it is somewhat problematic that no contrast could be shown for g and gw. A second solution would be to assume that a is [+round]. It would be hard to explain, then, why such forms as 'I know' gacíndai have ga not *gwa. The third solution, and the one I propose, is an underlying rounded diphthong /oa/ which would labialize the k by the rule given in (41) above.

The evidence for this solution is both internal and comparative. Comparative evidence indicates that kw < *k. Also, kw appears in places where a andai are reflexes of higher vowels, e.g. i, e, ɛ, ui. To anticipate the discussion of the history of vowels, the diphthong /ia/ appears to have developed as a lowering and diphthongization of *i. What I propose is that one diphthong ia developed from *i and the initial of ia became rounded to oa following the velar consonants. In the past this was phonetically conditioned but is now preserved in the underlying distinction between /ia/ and /oa/.

The forms in which k precedes ia, e.g. 'tongue' -kia? (FTYK) do not represent a problem if we assume this k (<*ts) to have first been tc. That is, the development I have suggested above of the AVK tc forms being an intermediate stage between PA *ts and FTYK k.

III.7.1 Summary

I can now summarize the analysis of velar stops. I have assumed /g/, /k/, /k'/, and two diphthongs /ia/ and /oa/. I have further assumed a set of processes by which /g/ and /k/ optionally become gw and kw when followed by /o/. I have also assumed, but not explicitly mentioned yet, a number of vowel harmony processes which I will discuss later (III.11.1).

III.8 Laterals, glottal stop and v

The stops, dl, tɬ, tɬ', ?, and the fricative v need little mention since they undergo no changes. ? in some cases coalesces with the classifier d to give t'. Of course, without further morphological evidence it is impossible to separate t' < /d + ?/ from t' < /t'/. In some cases t' from either source becomes d in casual speech. It is possible that some of the stems now analysed as d come from t'. The stem 'to come' -dik may originally come from the classifier d + -?ik (cf. 'several go' -?o, -tc'íl, -?al).

III.9 Fricatives

There are two interdental fricatives, ð and θ. With one exception the voiced form ð appears to be phonetically conditioned as the following examples illustrate:

(44)	'you are warm'	ninðá
	'I am warm'	niθá
	'you want'	yinðán
	'I want'	yiθán

The second person singular prefix in this case is -n-. The first person singular prefix is -c-. It rarely occurs on the surface. The choice in this case, of course, is between considering the underlying form to be /ð/ which is devoiced after -c- or /θ/ which is voiced following -n-. Several other examples will show that /θ/ is probably the correct form.

(45)	'trousers'	θáɬ
	'portage'	θetá

In my data there is only one case of ð word initially and that is the ð perfective. For example, for 'sat'one informant gave all of the following forms:

(46)	'sat'	t'eðídi
		deðídi
		ðídi

I suggest that in word-initial position ð results from the coalescence of the two prefixes de and ð.

There is only one peculiar case of the opposite, i.e. θ in intervocalic position, 'abomasum' tc'idéθa. I had taken this word from Mueller's dictionary (1964) and asked the informant if he knew it. He did not say it was unknown to him but he pronounced it very carefully. Of course, it is not surprising that a process which voices intervocalic fricatives in casual speech has been suppressed in the event of cautious pronunciation.

Although the evidence is still not strong I feel that it is most natural to consider the voiceless /θ/ to be the underlying form with a surface voicing process producing ð in voiced environments.

The fricatives s and z occur in very few forms. (47) gives several representatives.

(47)	'good'	-zɬ́
	'to be good'	-zɬ
	'grasshopper'	tc'ahasík
	'star'	są́ʔ
	'young bull caribou'	dazotsó

As in the case of ð/θ, s and z alternate. Again, we have the same choice between considering the voiced alternate as the underlying form with a devoicing rule or the opposite. Here, as with ð and θ I feel it is more natural to assume /s/ with a rule voicing it to z intervocalically. The one exception, 'grasshopper' tc'ahasík is, again, a word the informant did not seem to know but was pronouncing it carefully on the basis of my prompting from Mueller's dictionary. Concerning these two exceptions, 'abomasum' tc'idéθa and 'grasshopper' tc'ahasík it is important to note that Mueller has recorded them as not being exceptional. That is, presumably his informants did know these words and were not being particularly careful. For my analysis, however, I feel that a single exception each for ð/θ and z/s is not enough to contradict the analysis.

The fricatives c and j, unlike the others, do contrast as the following list indicates.

(48)	'don't hunt'	nónɽicąʔ	(Not: *nonɽijąʔ)
	'it blows'	gwácol	(Not: *gwájol)
	'bear'	cíʔ	
	'louse'	jíʔ	

As can be seen from these few examples c and j contrast in both initial and medial position. One further process should be mentioned here. In some cases j is weakened to y a palatal glide. (49) gives several examples.

(49)	'snow on spruce boughs'	déjaʔ	
	'ice crystal snow'	tsaíyaʔ	
	'ice on a creek'	tányąʔ	
	'far'	nɬjít	
	'far'	niɳyít	(form given by child)

By way of comparison I should also note here that ɽ varies with r, a frictionless retroflex, in rapid speech.

There is no evidence for contrast between ɽ and c̣ . c̣ occurs in initial position with ɽ occurring intervocalically. Several examples are given in (50).

(50)	'knife'	ḉi
	'sun'	ḉe
	'hunt'	-ṛi
	'dirty'	ḉaį
	'to be black'	-ṛaį
	'to bark, yell'	-ṛál ~ -rál

The frictionless retroflex r also has another source. The 1st person plural and 3rd person indefinite prefix is tr'- when it occurs in initial position. When it occurs intervocalically, however, is is reduced to r. For several examples see (51).

(51)	'we hunt'	naráṛi
	'we hear them'	gorítθ'ak
	'we drink'	tr'íni
	'we make'	tr'átsi

There are several cases where r appears and it is not certain that it is from either of these sources. For example, in 'store' tc'aroxwejé/tc'aroko?jé the r may or may not be the third person indefinite prefix. I think it is likely that it is. In another case, however, it definitely is not. One informant gave me the following sentence: 'Is that something sitting up there?' ?ot'e-a dodír? At this point the final r in this one form is a complete mystery.

There are many examples of the velar fricatives, x, xw, γ, γw. (52) is a list of the most problematic of them.

(52)	'winter'	xaí
	'root'	xai
	'kill'	-xwaí
	'fall (Class II)'	-γa
	'throw (Class II)'	-xa
	'leg'	-γwa
	'pack, carry on back'	-γwa

There are no cases of γ or γw in word initial position. γ and x alternate in the 'fall/throw' forms, with x after the -ɬ- classifier. On the basis of these considerations, x and γ can be seen to follow the same process of intervocalic voicing as most of the other fricatives. As for the labialized forms, xw and γw, I have analysed these as being similar to the velar stops. That is, I have assumed an underlying diphthong /oa/ where x and γ are labialized before a surface a. In all of the other cases where xw and γw occur they precede o, the environment for labialization. The four velar fricatives, x, xw, γ, and γw can be seen to be derived from one underlying fricative, /x/.

The laterals, ɬ and l are, perhaps, the most difficult of the fricatives. There are many forms in which l is found as a word initial, for example, 'money' lerę́, 'salt' lesíl. In all of these cases the words can be shown to be borrowings from French or English. In historically Kutchin forms l does not occur in word initial position. (53) gives examples of some of these forms.

(53)	'tea'	ledí
	'fish'	ɬúk
	'ling cod'	trelúk
	'dirt'	ɬu
	'smoke'	ɬát
	'I put the logs there'	tra níli (ní - Ø - li)
	'I always put the logs there'	tra níɬi (ní - ɬ - li)

In these cases the solution is to consider /l/ for the borrowed forms and /ɬ/ for native forms with an intervocalic voicing process as with the other fricatives. There are several problems with this solution. First, both ɬ and l are found in final position. For example, 'trousers' is θaɬ, but the diminuative suffix is -tsal. This problem could be resolved by assuming that final ɬ derives from an underlying final /l/, and final l derives from an underlying /lV/. This is similar to the analysis of nasal vowels in final position being derived from underlying vowel - nasal sequences and final nasal consonants deriving from an underlying vowel - nasal - vowel sequence. Again, as in the case of the nasals, comparative evidence is in support of this (cf. Chip. 'small'-tsele).

This does not clear up all of the problems, however. (54) lists some of the problem forms.

(54)	'jackfish'	ʔiltín/ʔaltín
	'yellow pond lily'	kalt'ú
	'one'	ʔiɬák/djiɬák

In the case of 'jackfish' it is difficult to explain why it is not *ʔiɬtín. The intervocalic environment could be restated as 'following a sonorant' to take care of this case. However, in the case of the final l's I analysed them as having a vowel after the ɬ. It seems clear that to avoid losing that generality, ʔiltín must be assumed to have /l/, i.e. /ʔiltín/.

In the case of 'one' ʔiɬák it is difficult to explain why it is not *ʔilák. For now the best solution is to assume an underlying contrast between /l/ and /ɬ/ wherever there is no surface alternation. In the cases where there is alternation the underlying form must be /ɬ/ as with the other fricatives but with an intervocalic voicing process which is blocked in several cases such as for 'one' ʔiɬák.

Finally there is a surface alternation between the two classifiers ɬ and l. Although I have not completed my analysis of Kutchin classifiers it seems best now to consider all cases of the surface classifier l to result from a coalescence of the two classifiers, ɬ and d.

Finally there is the fricative h. Several examples should be sufficient to illustrate.

(55) 'to talk'

1st. pers. sg.	-ci	-he?	-ca
3rd. pers. sg.	-he	-he?	-hia

'one person goes'

1st. pers. sg.	-ca	-jí	-cá
3rd. pers. sg.	-há	-jí	-há

As in other Athapaskan languages the third person singular is not marked. The first person singular is -c- in the imperfective and future and -i·- in the perfective. It is clear that this is the source of the alternation between c and h in these forms.

III.9.1 Summary

In the analysis above I have assumed the following underlying fricatives: /θ/, /s/, /c/, /j/, /ç/, /x/, /ɬ/, /l/, and /h/. In every case except some instances of /c/ and /ɬ/ the voiceless fricatives become voiced between sonorants. Because of the limited amount of data on which this study is based and because the analysis of the fricatives rests on an analysis of morphological processes these statements should be understood to be tentative.

III.10 Final consonants

The number of consonants found in final position is quite limited. They are t, k, l, ɬ, n, ?, and the sequence n?. I have written t and k rather than d or g because they are variably aspirated in final position. The aspiration in final position is never as strong as in initial position, however, where it has sometimes been transcribed, e.g. [tx̲]. Of the final consonants only two are voiced, l and n. I have suggested in the separate analyses that these have a vowel following them in the underlying representation.

III.11 Vowels

The following vowels are found on the surface: the tense vowels i, e, a, o, the lax vowels, ɪ, ɛ, ɐ, ɔ, the

diphthongs ia, iu, oa, ɛi, ɔi, oi. All of the above except oa are found in both nasal and oral forms.

Of course, a number of these vowels are predictable. The lax vowels are found in closed syllables and the tense vowels in open syllables. A syllable of the shape CVʔ acts as an open syllable, i.e., the vowel before a glottal stop is tense.

Although in some cases a distinction in length appears on the surface, I have analysed these surface long vowels to be the coalescence of an underlying sequence of vowels. For example, in (56) the i· is produced from the 1st person singular perfective i coalescing with the vowel of the ɔ perfective. (The third person perfective is Ø.)

(56) 'I sat' ɔ́i·di
'he sat' ɔ́idi

In several other cases the long vowels can be shown to result from a sequence of prefixes from which a consonant has been deleted. For example see (57).

(57) 'it is good' gwɨnezɨ́
'it is good' gwɨ·zɨ́

Both of these forms were given by the same speaker.

In discussing final nasals I also indicated that I have analysed surface nasal vowels as resulting from underlying vowel-nasal sequences. In fact, all surface vowels are nasalized when they precede a nasal. Only in the cases where this nasal does not appear on the surface has nasality been marked. For example, 'to be in a place (Class II)' -tin is phonetically [tx̱ɨn] and 'to hold'-tą is phonetically [tx̱ą]. The nasal vowel in -tin is predictable on the basis of the following n and for this reason has not been marked.

There are two palatal initial diphthongs, ia and iu. iu does not contrast with u and for this reason I have always written it as u. The other diphthong, ia contrasts with a. Several examples are given in (57).

(58) 'he will speak' -hia
'he will go' -ha
'to see, look (fut)' -ʔia
'to eat (imp)' -ʔa

This contrast is neutralized following all consonants of the dj series and the dr series as well as the stops of the dl series. (59) gives several examples.

(59)	'to wash'	-tciə
		-tcia
		-tca
	'wet'	-tra
		-trə
	'mocassin'	-triə
		-tra
		-trə

This contrast between ia and a is also neutralized in rapid speech. For example, 'very' in rapid speech is ɬá but in slower, more careful speech it is ɬiá.

The diphthong /oa/ was discussed above. Historically I analyse it to be the variant of ia which occurred after velars.

There is considerable surface variation of the diphthongs ɛi, əi, ɔi, and ɛɬ, ʔɬ, ʔɬ. (60) gives several examples.

(60)	'to kill'	-xwɛɬ́	(Speaker of AVK)
		-xwəɬ́	
		-xwʔɬ́	
	'to kill'	-xwɛɬ	(Speaker of FTYK)
		-xwʔɬ	
	'smooth'	-xwəi	
		-xwɛi	
	'wife's sister'	-xwəi	
		-xwɔi	

I assume two underlying diphthongs /oi/ and /ai/. /oi/ labializes /x/ to [xw]. /ai/, as in 'winter' xaí (but never *xəi or *xɔi) does not result in [xw]. /oi/ varies on the surface between [ɛi], [əi], and [ɔi].

III.11.1 Vowel harmony

One of the difficulties in analysing the vowels of Kutchin is the widespread vowel harmony. As far as I have been able to determine, however, this affects only prefix vowels. For this reason the analysis I am presenting here is based on the kinship terms I have collected which always require a possessive prefix.

The first person singular possessive prefix can easily be shown to be c- plus some vowel. (61) gives a number of examples.

(61)

'my father'	cíti?
'my wife'	citr'índja
'my niece'	cídju
'my friend'	cídja?
'my son-in-law'	cedeniá
'my younger brother'	catcá
'my wife'	cá?at
'my husband'	cákąį?
'my sister-in-law'	cɔxwaí

It is clear from these examples that the surface prefix vowel is i before i, ia, u; e before e; a before a and ai; and o before /oi/. All of these assume an intervening consonant. Two forms which I have not given yet indicate that the underlying vowel for this prefix must be /e/. These two forms are 'my older sister' cedjí and 'my uncle (mother's brother)' ce?í. I have analysed these two forms as /ce#adjí/ and /ce#a?í/, respectively. This analysis would allow the following rules:

(62) $/e/ \rightarrow i / \_\_(C) \begin{Bmatrix} i \\ u \\ ia \end{Bmatrix}$ (i.e. [+palatal])

a/__(C) a(i)

o/__(C) [+round]

e/ elsewhere

This set of rules would give the forms of (61) quite simply and also explain why 'my older sister' was not *cidjí.

In the discussion of velar stops I mentioned the assumption of a vowel harmony rule. This rule is as follows:

(63) $o \rightarrow u / \_\_(C) \begin{Bmatrix} i \\ u \\ ia \end{Bmatrix}$

As an example of this we have 'people' gutc'ín from /gotc'in/. This form is further changed in rapid speech to gwitc'ín indicating that the environment __i at least, tends to front as well as raise the preceding vowel.

Although I feel a certain amount of confidence in this analysis of vowel harmony, it is incomplete as it stands. A further study would have to include rather complex morphological processes and would certainly have to be based on a larger amount of material than I have collected.

III.12 Tone

Kutchin has two tones, high and low. The high tone is a high falling pitch with a quick diminuition of intensity. It is marked here with an acute accent (´). The low tone is also a falling tone but does not drop as far as the high tone and is extended somewhat in length. That is to say there is a length distinction which accompanies the pitch distinction with high tone being shorter than low. Low tone is not marked since whatever is not high tone is low.

In addition to these tones there is a question pitch which is expressed by making the last syllable of a sentence a high level pitch. Under this condition the distinction between high and low tone is neutralized. In closed syllables the vowel is always short so in these the length distinction between high and low tones is neutralized. These tones are found in their 'purest' (i.e. highest or lowest) form in the verb and noun stem syllables.

In the prefix syllables tones are somewhat more difficult to determine because of two processes. Prefix high and low tone are not as high or low, respectively, as in the stem syllables. In addition, in casual speech stress is given to the penultimate syllable. This results in high tone in this position remaining high but preceding high tones being depressed. A low tone receiving stress is raised but not as high as the level of a high tone. These effects can be summarized by saying that in casual speech the last underlying high tone in a word will be high with the preceding high tones lowered.

Several examples which will make these processes clearer came up in the course of elicitation. The form for 'I will return tomorrow'is k'enehiɬdík. The informant gave it to me slowly, building it up by syllables as follows:

(64) k'ené
k'enehí
k'enehiɬdík

That is, -né-, -hí-, and -dík are underlying high tone. In pronouncing the whole word, however, only the final syllable receives the highest tone. The syllable -hí- /hé/ is the future prefix and in cases where the stem syllable is low tone and there are no other high tone prefixes following,the high tone appears on the surface. For example, 'I will go hunting' is nahálṛi .

Finally, as an example of both slow and rapid speech, 'I throw it (e.g. a cup of tea)' was given in slow speech as ʔó-an-hó-tɬit but in rapid speech as ʔoanhótɬit.

Having said this much about tones, I should point out now that many informants are not entirely consistent. The stems for the verb 'to make' will indicate some of this variety. The informant, J, is generally a speaker of AVK. S is a speaker of FTYK. D is an eleven year old girl. The forms are given as in the word list in the order, imperfective, perfective, and future.

(65) 'to make'

J:	-tsí,	{-tsą́ (rehearsed) / -tsi (recorded)}		{-tsia / -tca}
S:	-tsi	{-tsi (rehearsed) / -tsą́ (recorded)}		{-tsia / -tca}
(quoting J) S:	-tsí	---		-tsiá
D:	---	---		-tsę

(Note: in another case S gave both -tsí and -tsi for the imperfective. Also note the variation between -tsą́ and -tsi for both J and S. This variation has been discussed earlier (II.2) as indicating a contrast between FTYK and AVK, at least for J. The forms -tsia and -tca are in variation for both J and S.)

A comparison of the first two sets shows that the difference between J and S (therefore AVK and FTYK) is that where J has high tone S has low tone. Further evidence that this is really the principle is indicated by the fact that S quotes J as saying -tsí (correct) and -tsiá (incorrect). This latter is not correct but does follow a general interpretive principle or hypercorrection which assumes that AVK has high tone where FTYK has low. To get the correct forms one has to go from AVK to FTYK, i.e. it works to lower high tone to low tone but it is incorrect to raise some low tones to high tones. These differences were further corroborated by another informant, a speaker of AVK, who gave high tone for 'to make'(imperf.) -tsí, and the child D (FTYK) who gave the low tone on -tsę.

This distinction between AVK and FTYK is apparently fairly regular and fairly widespread. Examples have been given in II.2 (4) and are repeated here.

(66)

	AVK	FTYK
'to sit'	-dí, ---, -diá	-di, ---, -dia
'to run'	-gál	-gal
'to drink'	-nį́	-nį
'to stab'	-gót	-got

In addition to these examples there are many more which follow this general principle. On the other hand there are no examples of the opposite. That is, there are no cases where FTYK has a high tone and AVK has a low tone. All of these can be described as a shift from the AVK (therefore, conservative) high tone to FTYK low tone.

There are several ways that this difference could be understood. One solution would be to assume that FTYK has an underlying high tone where AVK has high tone but that a penultimate stress rule shifts that high tone to low. This could not be the case, however, since in many places the two varieties agree in giving high tone to final syllables, e.g. 'I am hurt' gwiłts'ík (AVK and FTYK).

The explanation that seems most plausible to me is that FTYK is in the process of replacing tone with stress. All of the changes mentioned here result in the penultimate syllable receiving a higher pitch than the final syllable. It is only in the cases where underlying high tone is still marked that a final syllable receives high pitch and in the other cases no underlying pitch is represented.

It is not surprising that FTYK which speakers of AVK associate with the language of contact with English because Ft. Yukon was the principal place of contact with non-Indian culture, should show processes which tend to make it somewhat more like English. One person who speaks FTYK even made this connection more explicit by pointing out that in speaking Kutchin you have to 'go up' in places you don't in English, especially 'at the end'. The meaning of this is that Kutchin has high pitch in places where English does not have primary stress. In this particular case he was, in fact, pointing out a final syllable high tone.

Of course, this is not the final word on tone and stress in Kutchin. If I am right in this analysis then the treatment of stem syllables when they are followed by suffixes would assign penultimate stress to the stems. In this case I would expect a low stem syllable to be raised in pitch. Unfortunately, I don't have the data I would have to have to check this.

In the word list (V.6 and V.7) I have marked only the high tones. I have assumed that all others are low (AVK) or unmarked (FTYK). Since I do not have many of the forms in the list from speakers of both varieties, the marking of tone must be taken to represent that of speakers of FTYK. The high tones which are marked are probably more generally accurate since I depended more heavily on a speaker of FTYK than any other single informant. Since there are no cases

where FTYK has a high tone and AVK has a low tone, a high tone probably represents both varieties but a low tone may only represent FTYK.

III.13 Phonology of loan words

I pointed out earlier (II.1) that there are four main linguistic varieties in use in AV. In this section I am referring to words used by Kutchins as AVK or FTYK words within contexts of those varieties. I am explicitly not referring to AVE or SE phonology which may be quite different. Because these distinctions are quite difficult to make in practice, in this section I am referring only to words which I recognize as loans (mostly from English) which have appeared within sentences in which the grammatical elements are Kutchin or in several cases words which informants gave as Kutchin words in the context of the elicitation of lists of Kutchin words. In most cases these were not treated by the informant as borrowings but given without comment as Kutchin. Because of these restrictions the number of forms I will refer to is quite limited. I was specifically eliciting Kutchin forms in most of the sessions and informants would sometimes actively suppress a borrowed form even if it was the preferred form. That is to say, what is represented here is a set of fairly well integrated forms.

Some examples of borrowed forms are given in (67). They are grouped into several general types.

(67) Names of borrowed objects:

airplane	érblein
spoon	spun/cpun/sapun
money	lerą́
tape recorder	teíbrigordah
tea	ledı́

Numbers above ten; but others too, recently:

ten	tín
seven forty-five	seven fórdi fai
several	trífor

The English Alphabet

ABC	a·bese

Christian names

James	jémis
Isaac	aízík
John	jan

Other

last year	læsyir
family	fámli
hungry	hángri

It should be clear, expecially, from the last group that borrowing is common and not solely restricted to objects borrowed into the culture. Whether such a concept as 'last year' is exactly synonymous with the Kutchin term is, of course, open to question. In this case the Kutchin form must refer to season, e.g. hecín 'last year, last summer' or hexaí 'last year, last winter'. The borrowed word is indeterminate for season. Nevertheless, the point I wish to make is that these are not objects in the way that airplanes, tape recorders, and spoons are.

Of the consonants listed in the stem/word list two are found only in loan words, b and f. The bilabial nasal, m, which is quite rare in historically Kutchin words is found only in 'breast, milk' ma?. It is more frequent in borrowed words.

The retroflexed vowels ɪr, ɛr, and ɔr which I have written as i , er, and or must be added to the list of vowels. There is also one instance of [u] in 'canoe' [kx̱inu]. This is the only case in which u is not phonetically [iu].

In borrowed forms there are also a number of clusters which are not found elsewhere in Kutchin. They are as follows: bl, ml, sp, cp, ls, br. It is likely that more forms than these would turn up in a fuller study.

The borrowed words given above and in the word list are sufficient to show up a number of processes. In a study of AVE that I have also planned I will look at some of these processes in more detail and in retrospect will likely want to clarify some of the things presented here. With the forms available here, however, we can see some quite general processes. All final voiced consonants in English are absent in the corresponding Kutchin forms. For example, 'five' is fai. The final consonant of 'eight' and the intervening schwa are reduced to produce from 'eight o'clock etɬák. Notice the substitution of Kutchin tɬ for the English sequence kl. The final sequence ns in 'license' is reduced to n in Kutchin laisen.

Intervocalically consonant clusters are simplified by either the elimination of a consonant or an epenthetic vowel being introduced. For example, 'James' is jémis but 'last year' is læsyir. (James may be a spelling pronunciation.)

In general Kutchin consonants are substituted for the nearest equivalent in the borrowed language. What this means

is that the Kutchin voiceless, unaspirated series consonants are used in place of English voiced consonants. For example, the final syllable of 'tape recorder' is dah. Kutchin aspirated series consonants are used for English aspirated consonants, e.g. 'tape recorder' teíbrigordah. It should be recalled that aspiration in Kutchin is much stronger than in English. Notice that 'tea' ledį́ has d not t. This form was probably borrowed from French and not English.

I have tentatively marked tone on some of these words. One speaker of AVK appeared to make at least some tone distinctions. At the time of collecting this data however, I didn't investigate this question. The number of forms at my disposal now makes any statement about tone in borrowed forms quite tentative.

One final and important note should be made about articulation in general. All of the sounds of Kutchin and English are articulated with the tongue in a position which is farther back than for speakers of SE. This gives to all of the consonants and vowels a quality that is somewhat different from the corresponding English quality. The symbols I have used in this paper represent the Kutchin basis of articulation (Drachman 1973, Delattre 1966, Gregerson 1973, Kim 1972) which is the same for all of the varieties spoken by Kutchins in AV.

IV. Notes on Kutchin historical developments

In the discussion of Section III I made some references to historical developments in Kutchin. In this section I will summarize the points made above, add some new observations and then sketch what I see as the general outline of Kutchin's history.

The list that follows in (68) gives some correspondences for forms taken from the stem/word list of Section V. I have made comparisons with Chipewyan (Li, 1933a) and in many cases with Navajo (Hoijer 1974). This list is not intended as a basis for reconstruction of Proto-Athapaskan but rather to illustrate correspondences and processes in Kutchin. The PA consonants are taken from Krauss (1964a) with the exception of his *g" series. I feel that my evidence supports Sapir's reconstruction of *dj for the Kutchin retroflex series. To keep the list as brief as possible only a few examples of each correspondence are given.

(68)

PA	Kut	Gloss	Kutchin	Chipewyan	Navajo
*w	> v	stomach	-vat	-bér	-bid
		gray,blurred	-vé	-ba	-ba?
*d	> d	heavy	-dí, -di	-daδ	-daaz
		sit	-di,-di?	-da,-dá,-dá	-nédá
		four	dǫ	dɬɣɬ	díí
	> dj	this	djí	diri	dii
		horn	tc'ídji	-dé	-dee?
*t	> t	hold	-tą	-tún,-tún	-tą?
		teach (sg.)	-tan,-tín	-tą́	-tin,tɬɬ
		three	tík	taɣɛ	táá?
		father	-ti?	-tá	-taa?
		road	-tąɬ	-tane	-tiin
	> tc	sleep	-tcɬ	-tɬ,-tɬ́	- -
		count	-tcá	-tá	-tah
		water	tcų	tu	tó
*t'	> t'	cut	-t'í	-t'aθ	-t'as
		feather	-t'e	-t'á	-t'a?
		hit (fist)	-t'án	-t'us	- -
	> tc'	people	-tc'ín	-t'ɬnɛ	- -
		live	-tc'i	- -	-t'ɬɬ^{ɬ}
*n	> n	drink	-nɬ, nɬ	-dą́,-da	-nééh,-na,-nah
		eye	-nde?	-na,-naɣa	-náá?
		fall(paper)	-ndak	-né	-nééh
		know	-ndai	-ni,-ni,-ni	- -
	> ndj	drink(fut)	-ndja	-dą́	-nah
		long	-ndjá,-ndja	-nɛθ,-nɛδ	-neez
		island	ndjú	nu	- -
		person	dindjí	dɛne	diné
*dl	> dl	laugh	-dla	-dlóɣ	-dlo
		squirrel	dlak	dlíyɛ	- -
*tɬ	> tɬ	throw(mud)	-tɬit	- -	-tɬeeh,-tɬéé
*tɬ'	>tɬ'	grass	tɬ'o	tɬ'oɣ	tɬ'oh
		hind part	-tɬ'i	-tɬ'á	- -
		hard,strong	-tɬ'ó	-tɬ'éδ	-tɬ'iz
*ɬ	> ɬ	one	?iɬák	?ɬáɣɛ	ɬá?
		flour	ɬu	ɬɛz	
	> l[6]	many	lę,lɬ	ɬą	ɬą́
*(l)	> l[6]	hand	-(nd)li?	-n-lá	-la?
		be, become	-li	-lé	- -

PA	Kut	Gloss	Kutchin	Chipewyan	Navajo
*dz	> dð	mountain	dðá	(doubtful example)	dziɬ
*ts	> tθ	anus	-tθál	-tθɛlɛ	- -
		flesh	-tθąɬ	-tθén	-tsɨɬ?
	>tc,k	stone	tcí, kí	tθɛ	tsé
		head	tci?,ki?	tθí	-tsii?
		tongue	tca?,kia?	tθʊ	-tsoo?
*ts'	>tθ'	bone	tθ'an?	tθ'en	-ts'in
		also,again	tθ'aí	tθ'i	- -
		hear	-tθ'ak	-tθ'aɣ	-ts'ɬ́ɬ́h
	>tc',	dish	k'it	tθ'aí	- -
	>k'	hear(perf)	-k'ɬ	-tθ'ą	-ts'ą́ą́?
		sinew	tc'i,k'i	tθ'ɛ́	-ts'id
		mosquito	tc'í,k'í	- -	ts'i?ii
*s	> θ[6]	be warm	-θa	-ðel	-zil
		think	-θat	-ðan	-zin
		skin	-θa	-ðéð	- -
*dj	>dz	muskrat	dzán	dzán	- -
		ear	-dze?	dzaɣá	djaa?
	>dr	day	drín	dzɨnɛ	djɬ́
*tc	>ts	make	-tsí,-tsi	-tsi	-tcí
		red	-tsík	tsi	tcíí?
		smell	-tsin	-tsan	tcą́ą́?
		beaver	tse	tsá	tca?
		small	-tsál	-tsele	tcil
	>tr	feces	-trin,-tra?a	-tsán,-tsą́	-tcɨ?,tcąą?
		wet	-trá	-tsel	- -
		cry	-tré	-tse	-tcah
*tc'	>ts'	hurt,sick	-ts'ík	-ts'ai	- -
		lie	-ts'it	-ts'í,-ts'i	-tc'ííd
		spruce	ts'ívi	ts'u	tc'ó
	>tr'	canoe	tr'í	ts'i	- -
		wind blow	-tr'aí	-ts'i	-tc'i
		woman	tr'índja	ts'é	- -
		3rd. indef.	tr'-	ts'ɛ	- -
*c	> c	I	cɨ́	si	cí
		my	cɛ	sɛ	- -
		bear	cí?	sas	cac
		spring	cín	sɨnɛ	cɨ́
		sun	ɕé	sa	ca
	>ɾ	hunt	-ɾi	-zɛ	-jéé́h
		name	-ɾi	-n-zi	-í-ji?
		black	-ɾąɬ	-zan	-jin

PA	Kut	Gloss	Kutchin	Chipewyan	Navajo
*g^y	> dj	fear	-djá́t	-djer	-dzíd
		old	-djat	-djɛr	-dzíd
		berry	djá́k	-djíyɛ	-dzé́
	>dz	here	dzią	dją	dzą́ą́
		mink	tcidzú́	tedjusɛ́	- -
*k^y	>tc	tie	-tca	-tcɛθ	- -
		big	-tcó́	-tcoγ	-tso
		wood	datcán	dɛtcin	-tsin
	>ts	be big	-tsí́	-tca	-tsa
		tail	-tsi	tcé́	-tsee?
*k^y'	>tc'	tear	-tc'á́	-tc'uɬ	-ts'iɬ,-ts'iɬ
	>ts'	narrow	-ts'ík	-tc'uðɛ	- -
*x^y	> h	say	-hi,-he,-hia	-sį,-ní́,-si	
		go(one person)	-ha,-jí́,-ha	-sa,-ya,-sa	-há́á́h,-yá́,-há́á́ɬ
*y	> j,y	go(one,perf.)	-jí́	-ya	-yá́
		snow	-já́,-yá́	yaθ	yas,zas
		below	-jé́	-yɛ	- -
		house	jé́	yɛ	- -
		louse	jí?	ya	yaa?,-ya?
*?	> ?	wife	-?at	- -	-?á́á́d
		look,see	-?ín	-?į́	-?į́
		snowshoe	?ai	?ai?	- -
*g	> g	white	gą́ɬ	-gai	-gai
		arm	gin	-gané́	-gaan
*k	> k	sew	-kai	-kąi?	- -
		sweet	-kąɬ́	-kan	- -
*k'	> k'	fat	-k'í́	-k'a	-k'ah
		arrow	k'i	k'á́	k'aa?
*x	> x	winter	xaí́	xayɛ	xai
		root	xai	xai	- -

*g^w, *k^w, *k^w', *x^w (Since all of these can be predicted synchronically in Kutchin from consonants above, no direct correspondences with PA consonants can be shown.)

It is evident from the correspondences above that there has been widespread palatalization in Kutchin's history. Before looking at this process we should look first at some vowel developments. In the discussion of section III I pointed out the diphthong ia which was responsible for palatalization of the preceding consonant. From the examples given above it can be seen that in many cases (but not all)

Kutchin ɪa < PA *i. (See, for example, 'to tell' -niá/-ndja; cf. Chip. -nɪ, Nav. -niił).

Another development is that PA *a > ɪ in Kutchin. In these cases, however, the ɪ does not palatalize the preceding consonant. (See, for example, 'heavy' -dí, -dɪ; cf. Chip. -daδ, Nav. -daaz). A further development is that in some cases this ɪ (< *a) becomes ɪa, e.g. 'go, be' -dɪ, -dí, -día, cf. Chip. -dé, -dé, -dé). This ɪa, however, does not palatalize the preceding consonant. The ordering that these developments suggest is this: First, consonants palatalized in environments preceding PA *i, second, PA *a > ɪ, and finally, ɪ from any source optionally becomes ɪa.

Evidence given in section III and the comparative evidence above suggests the rule given as (35) above and repeated here as (69).

(69) *g^y > dz/__[+palatal]
dj/ elsewhere

Forms such as 'to become big' -tsí, -tsɪ (cf. Chip. -tca, Nav. -tsa) indicate that this development took place after PA *a > ɪ, since that development produced the environment for rule (69). Also notice that the 'normal' development for PA *dj is dz in Kutchin and Chipewyan. Since this earlier development appears to be context free that would place it earlier than the vowel developments listed above.

Another development, the one which characterizes the AVK/FTYK split, was discussed in section III above and summarized in rule (31), repeated here as (70).

(70) *dz > dj/__[+palatal]
dδ/ elsewhere

followed by:

dj > g^y/__[+palatal]

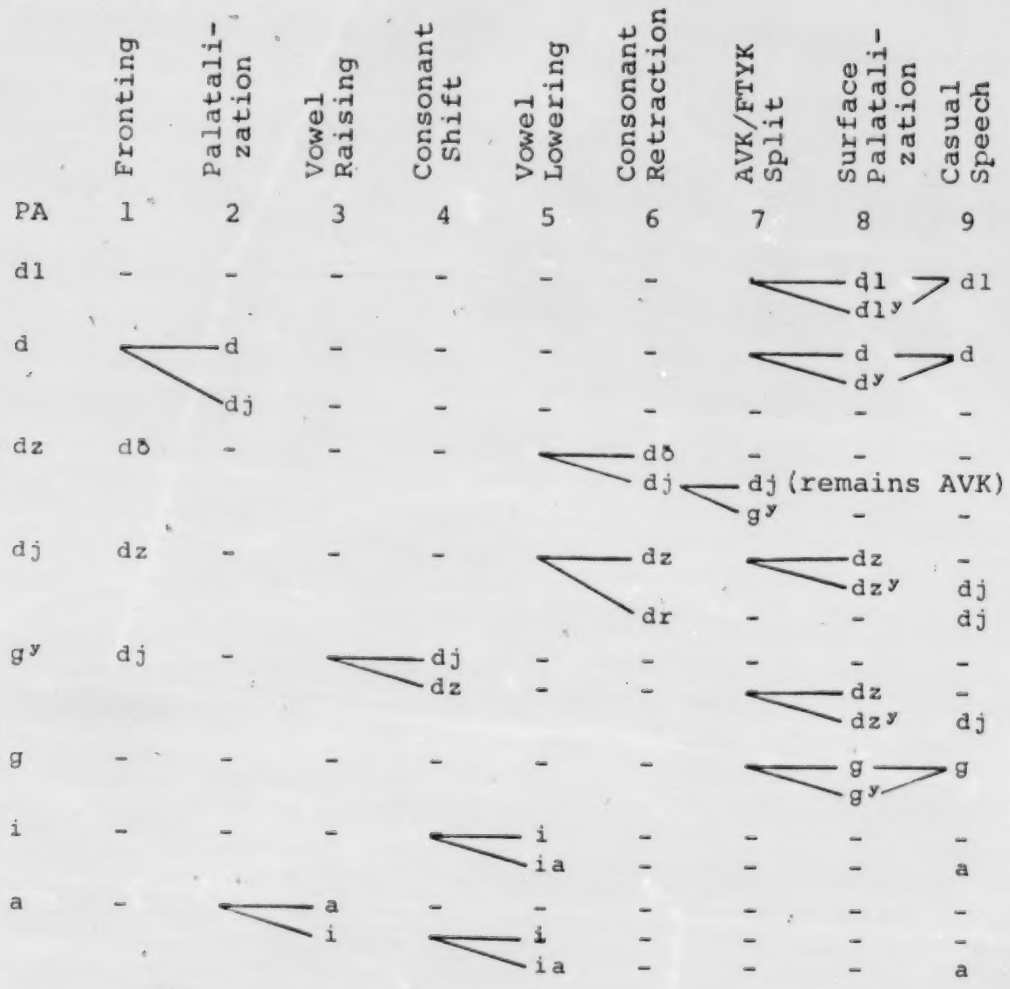
Of course, (70) produces just the opposite effect of the process in (69). It seems, therefore, quite unlikely that these two developments were going on at the same time.

The split of PA *dj into dz and dr is another development which must be accomodated to this outline. Since this split has the effect of reducing the number of dz series consonants we may suppose that it took place after one of the developments producing dz series consonants. This would argue for a somewhat more recent time for this split.

I mentioned above that virtually all of the consonants are palatalized (in this case meaning palatalized consonants of the same point of articulation) when followed by i, u, or ia. In rapid speech this palatalization is reduced in some cases, (e.g. 'very' ɬiá becomes ɬá) but actually changes the consonant in others, e.g. 'to make' (fut.)-tsia varies with -tca.

These developments can be summarized as in the chart (71). Only the consonants and vowels which undergo changes are mentioned. In each case the unaspirated consonant is used to represent the whole series.

(71)


Fronting
Palatali-zation
Vowel Raising
Consonant Shift
Vowel Lowering
Consonant Retraction
AVK/FTYK Split
Surface Palatali-zation
Casual Speech
PA 1 2 3 4 5 6 7 8 9
dl - - - - - - dl dl dl
dlʸ
d - d - - - - d d d
dʸ
dj - - - - - - - -
dz dð - - - dð - - -
dj dj (remains AVK)
gʸ - -
dj dz - - - dz - dz -
dzʸ dj
dr - - dj
gʸ dj - dj - - - - -
dz - - dz -
dzʸ dj
g - - - - - - g g
gʸ
i - - - i - - - -
ia - - - a
a - a - - - - - -
i i - - - -
ia - - - a

In working towards an explanation of these developments I suggest that the first three indicate a generalized fronting of the basis of articulation or tongue root position (Drachman 1973, Delattre 1966, Gregerson 1973, Kim 1972). Dentals became interdentals, alveolars became dentals, and alveopalatals became alveolars. From this point of view, Krauss' reconstructed *$\underline{g}^{w}$ series might at first seem reasonable. It still remains difficult, however, to explain why Chipewyan which also underwent the same fronting did not develop the retroflex series. In this case the evidence does not support Krauss' *$\underline{g}^{w}$ series.

The widespread palatalization of *d to dj and the following raising of *a to i in some cases seem to be quite natural developments. Although now it is difficult to state under what conditions PA *a became i, it is likely that it had some relation to final consonants which are now lost.

A by-product of the palatalization of PA *d to dj and of the increase in palatalizing environments with the PA *a to i shift is an increase in the number of dj-type consonants in the language. The result, of course, is an increase in homophony. The process numbered (4) above which, although it may be natural enough, is further motivated by the need to reduce homophony. Since only those dj's which go back to PA *g^{y} undergo this change it is apparent that /g^{y}/ was still the underlying form for these consonants and /d/ the underlying form for the dj consonants. That is, at that time palatalization was a process which applied to underlying forms.

The fronting that took place in Kutchin is paralled in Chipewyan only in the first step. This suggests that a time could be placed on these developments. That is, (1) took place after the Northern groups split with the Southern groups, and (2) through (4) took place after Kutchin split with Chipewyan.

The processes that I have numbered (5) through (8) reflect a retraction of the basis of articulation. The lowering of i (from whatever source) to ia began before (6) since ia is in the environment of some of the forms undergoing that change. This change is probably still going on.

The split of dð to dð and dj can be seen to be a retraction as well as the split of dz into dz and dr. It is peculiar, of course, that the environment for the retracted alternant is [+palatal]. (This is invariable in the case of dj but it is quite unclear in the case of dr.) The instability of this situation is, perhaps, reflected in the fact that these dj's

ultimately become palatalized velars (g^y) except for a small group which are retained for sociolinguistic reasons. The dr's produced by this split in rapid speech sometimes become dj's.

Of course, something needs to be said about the motivation for these changes. McKennan (1965) reports that all of his informants agreed on an origin for the Kutchins in the Tanana River area. The legendary migration to their present position may account for some of these changes. In their present position the Chandalar Kutchins were in frequent contact with Eskimo groups across the divide. Both Osgood (1936) and McKennan (1965) report that Kutchins regularly visited Eskimo camps and Eskimos reciprocated. These visits lasted for days and sometimes ran on into months. Unfortunately neither McKennan nor Osgood mentions how the Kutchins and Eskimos talked to each other during these prolonged periods.

The Kutchin attitude toward borrowing may shed some light on this matter. In the case of French and English it is clear that borrowing was and is an active process and has had the effect of introducing new consonants into the speech of Kutchins. I suggest that contact with the Eskimos may have had the same result during the time that it was common. The presence in Eskimo of a distinction between a forward velar and a back velar stop indicates, at least for those consonants, a retracted tongue position. I suggest, then, that from the period of regular contact with Eskimos the Kutchin began a retraction of the general basis of articulation which resulted in at least some of the changes in (5) through (8) in (71).

One further bit of evidence for the retracted position is the presence of such forms as 'sit (fut)' -dia. Apparently the combination of the two processes, retraction and palatalization result in the abundant palatalized consonants of modern Kutchin. The combination earlier in history of fronting and palatalization produced the changed consonants dj, ndj, etc.

One final note on the Kutchin basis of articulation is appropriate here. One of the elders once told me that the whiteman's tongue was too long to speak Kutchin. I take this to mean that speakers of SE using a SE basis of articulation in speaking Kutchin have their tongues too far forward.

V. Kutchin-English word and stem list

This section begins with an introduction which presents the symbols used in the word and stem list along with some notes about their interpretation. This introduction is followed by the list itself. This list is in two parts, a Kutchin-English list and an English-Kutchin list.

V.1 Consonants

	Stops and Affricates			Nasals		Fricatives	
	Voiceless Unaspirated	Voiceless Aspirated	Glottalized	Prenasalized	Nasal	Voiceless	Voiced
bilabial	b				m		v
labiodental						f	
dental	d	t	t'	nd	n		
interdental	dð	tθ	tθ'			θ	(ð)
dental sibilant	dz	ts	ts'			s	(z)
alveolar sibilant	dj	tc	tc'	ndj		c	j
retroflex sibilant	dr	tr	tr'			ç	(ɾ)
retroflex continuant							r
velar	g	k	k'			x	(γ)
labiovelar	(g^{w})	(k^{w})				(x^{w})	(γ^{w})
lateral	dl	tɬ	tɬ'			ɬ	l
glottal			?			h	

The segments in parentheses are predictable, e.g. gʷ is found before o, or ð is found following a sonorant. Since in some cases, however, it appears that gʷ < /go/ may now be analysed as /gʷ/ by younger speakers, both forms are given in the word list, e.g. 'people' gutc'ín/gwitc'ín. This is an instance of a general principle I have followed with velars and the fricatives, where my analysis is least secure, of listing the phonetic shape of the forms. The alphabeticization is based on my analysis, however, so that ð and θ, for example, are listed under θ.

The segments b, f, and r are treated phonemically only in words borrowed into the language. r in historically Kutchin forms appears to be reduced from d or in some cases from tr'.

Virtually all of the consonants are palatalized when followed by i, u, or ia. The velars, especially, have alternate forms, gʸ, kʸ, kʸ', and xʸ and are also articulated farther forward than g, k, k', and x. These alternates have not been indicated since they are predictable.

V.2 Vowels

The vowels i, e, a, o, and u their lax forms ɪ, ɛ, ə, ɔ, and ʊ occur in both nasal and oral forms. Since the lax vowels occur in closed syllables I have written them all i, e, a, o, and u.

The diphthong ia contrasts with a with palatalization of the consonant preceding ia. In the cases of the dj series and the dr series consonants this contrast is neutralized. These have been written without the i of the diphthong, e.g. 'to wash' -tcá, not *-tciá. In the case of the laterals the contrast also appears to be neutralized, at least in rapid speech. The i has been marked for ɬ and l only since these are palatalized except in very rapid speech.

V.3 Tone

Kutchin has two tones, high (falling) and low (falling, but also long). High tone has been marked with an acute accent, e.g. 'person' dindjí. A vowel unmarked for tone is assumed to be low tone.

V.4 Alphabetical order

The words in the list have been given in the following alphabetical order: i, ia, e, ei, æ, a, ai, o, u, ʔ, h, y, b, m, f, v, n, ndj, nd, d, t, t', dð, tθ, tθ', θ (ð), dz, ts, ts', s (z), dj, tc, tc', c, j, dr, tr, tr', ç (ɻ), g, k, k', x (ɣ), dl, tɬ, tɬ', ɬ, l.[7]

V.5 Classificatory verb stems

As in the rest of the Athapaskan family, Kutchin has a set of stems with which objects are classified by semantic properties. There are six sets of these in Kutchin:

Class I: small solid round objects, but also culturally borrowed objects. This is, further, the miscellaneous class. Examples are: rock, cup (empty), cap, ball of yarn, store, heavy box (empty), and blanket.

Class II: long thin objects; e.g. pencil, rifle.

Class III: animate objects; e.g. person, puppy.

Class IV: container with contents (liquid or granular); e.g. cup of tea, cup of sugar, handful of sugar.

CLASS V: cloth-like objects; e.g. paper, shirt, (but note not blanket, which is Class I.

Class VI: plurals and rope-like objects; e.g. rocks, rope, pile of logs.

These classificatory verbs inflect in five ways which I have translated as (1) to be in a place (neutral), (2) to put or to handle (momentaneous), (3) to put or to handle (customary), (4) to fall, and (5) to throw.

V.6 Kutchin-English word and stem list

-índji? son (man speaker)
íjik right there (not close to speaker) cf. jík
iltín pike, jackfish (FTYK) cf. ?altín (AVK)
íɬar urine
-e?í uncle (mother's brother)
-endjít for e.g. cendjít for me
-edzį́? daughter (woman speaker
-edjí older sister
-ejí nephew (brother's son)
-ek'aí aunt (mother's sister)
etɬák eight o'clock
érplein airplane
a· 'A' (the letter A)
aí as for (topicalizing particle)
aízík Isaac
ąhą?, ?ąhą? yes
-ahą́ brother-in-law (wife's brother)
avé blurred, unclear (as without eyeglasses), grey
atsín rain cf. -tsín
ágat needles (of tree)
akwa no cf. -kwa (suffix)
ak'í fat (as a food)
ak'án fire
altín pike, jackfish (AVK) cf. iltín, ?altín
-ondé older brother
ǫ́djit whiteman cf. vanotɬít

ot'é above cf. -t'e
ojé below cf. -jé
-ótr'i mother-in-law (wife's mother)
-ó̩ri? name cf. -r̩i to name
or or
oben open (to be turned on)
ólso also
uénin West
uéndji? South
uét'i? North
ú·ndjík slave
utsą̨ivín weasel
-?í (ł) to hide, to do something stealthily
-?i, --, ?ia (Ø) (FTYK) to have (AVK) -?ı́
-?i to give birth
-?ia (fut) to have
-?ia (fut) to fish
-?ia (fut) to see, look
-?ią? (perf) to see, look
-?ín, --, ?ia to fish. cf. -?ín, to see, look
-?ín, -?ią?, -ia (ł) to see, look
-?ín to play (lerá tse?ín, to gamble)
-?ın to copulate
-?in to be (?)
-?in to want, do (?), e.g. djadení?inkwa Don't do that!
-?il several objects hang cf. -t'sit one object hangs
?iłák one, once cf. djiłák, djiłę́ (one person)
?iłák dinídi djedatín one hundred
?iłakónli? five cf.djiłónli?
?iławatín ten cf. djiławatín
---,-?e, -?é (ł) to lie down
-?é round
-?é, -?ę? straight
-?e to hate
-?é to fear, be afraid
-?ę́ to give, hand over
-?a,-?al, -?a (Ø) to eat, bite
-?a (ł) to feed
-?á (ł) to crawl
-?ą̨i (Ø) to be in place Class I
-?ą̨i (ł) to put, to handle Class I
-?ą́ to be lying on back
-?aí to set (sun)
?ai snowshoes
-?an to (the place of
-?at woman, wife
?at'ó birch
-?ak (Ø) (cust) to put, to handle, Class I
?a·k'í cow
?ak'í fat (adj)
?atr'í spruce bark cf. tr'i, canoe
?atr'aí wind cf. -tr'ai, wind blows
?altín pike, jackfish
-?o, tc'íl, -?al (Ø) several persons go cf. -há one goes
-?ó (ł) to sneeze
-?ok (ł) to flow (as a creek) slowly
-?u to step (on)
-hi, -he, -hia to talk
hídza? always
-hia (fut) to talk cf. -hi
hirt hurt
-he? (perf) to talk cf.-hi
hecín last year (summer)
héłok all
-há, -jí, -há One goes cf. -?o several go
-ha one goes (imp)
ha with (by means of)
hatc'ák'it a sore
haintr'aí belch cf. -tr'ai wind blows
han river
handjí almost
hángri hungry
-ho grind
yéa yeah
yétcalu? glacier deposit like flour
yekaí northern lights
-yeɣan father-in-law (wife's father)

yahá that, close by
be 'B' (the letter)
bába papa
-ma? breast, milk
mama mama
masí? thank you (French)
masitcó
mací?
macitcó
faí five
fámli family
fór four
fórdi forty
-via? to swim (animal) cf. -vík
-via? arch cf. çevia? rainbow
-vík to swim (person)
vitłé gedjįnedę́da wagon
vitcatsík Alaska blackfish
vé- 3rd pers sg possessive prefix
vegwá·ðat February
(ndé)-va? lips
ván lake
van? morning
van tc'ará?a breakfast
vanan ets'an tc'ąjį́ July
vanan di?ilí August
vanan tc'íɣo June
vanotłít whiteman cf. ǫ́djit
vándi? seeds
-vat stomach
vat'í?i shaman
vadzaí caribou
vadzairí October
varę́į́ piedmont
várąłk'ǫ́ piedmont creek, Arctic Village
vóntsanegónzaizetín nine
voka?á table
vų́ seagull
-ní, -nį?, -ndja (d) to drink
nia? moss
-nią́, -nią, -nią? to say (AVK) cf. -ndja (FTYK)
níyuk long time
nín animal
-nín sharp
-nindó?gų small intestine
nindjí lynx
nindjijú cat ('small lynx')
nínða? fur (animal skin)
-nídi? chin
-nitθ'an jaw
níts'ą? how cf.
nídjuk where
nijít far nįjít
nítra wolverine
nik'idǫ eight
nik'itík six
nilí meat
niįgąį dry meat
né- wnd pers sg possessive pronoun prefix
-nę negative suffix
ne?ę mother
neviá? caribou skin house
nénohot'é butterfly
netán thunder
nedðák sand
nedjúk seal (animal)
netc'agwahé foggy
negǫ́ fox
ne·k'ík sparrow
neɣán lake fish
-negwį́·hąį semen
nekwąį two, twice
netłi winter dog salmon
nerátsu coat
-na (perf) to say (FTYK) cf. -nią́ (AVK)
-ną́ to leave a remainder
-ną́į́ (Ø) to fall (Class I)
-ną́į (Ø) to fall (Class III,IV)
-ną́į (ł) to throw (Class III,IV)
-ną́į pluralizing suffix
-ną́į (perf) ( ) to break wood
-ną́į to enter
nán you (2nd pers sg subjective pronoun)
nán ground, earth
-nant'íjak lower back
nagąįtcatsál beading needle
nagąįdjatsál
nagąįtθatsál
nagón near cf. -gon short, shallow
nakát territory cf. -kat
nákal salmonberry

nak'ódji? sometime
naxón you (2nd pers pl subjective prefix)
nátłat bush cranberry
nohó- your (2nd pers pl possessive pronoun prefix
nǫ́ no
no?
-ndji to lift
-ndji to pray
-ndjí to strangle
ndjindji? when
-ndjík creek
-ndjík to finish
-ndja to drink (fut) cf. -nį
-ndja, -na, -ndja? to say (FTYK) cf. -nią (AVK)
-ndjá long (adjective)
-ndja to be long
ndjú island (of timber)
(ní)nde? eye
(ní)ndetcų tears('eye water')
-nde to swallow
-ndai, ---, ndai (d)to know
-ndai to be alive
-ndak (ł) to be tired
-ndak to pull
-ndak (l) to fall (Class V)
-ndak, --, ndak (ł) to speak
dí- our, someone's (1st pers pl/3rd pers indef possessive pronoun prefix)
-dí heavy
-di to be heavy (Ø)
-di (Ø) to squeeze
-di to push
-di?, -di, -dia to sit
-di, -dí, -diá (d) to be in a place (Class III)
-dia (Ø) (fut) to sit
-diá (d) (fut) to be in a place (Class III)
diví sheep
diviį́ November
díniį́i? ripe
dínk'e gun cf. -k'e to shoot a gun
dink'ékon gunpowder
-dínɣe beard cf. -ɣe? hair
dindjí person, Indian
dindjí cinilí doctor
dindjijú person, man
dindjítł'u? mucus cf.djítł'u? pitch, sap
dindjík moose
dindjíki? moose head
dindjikį́í September
díti? k'egwá·ðat God
didjí 3rd largest bull moose
-dík, --, -dík (ł) to come, return
dixón we (1st pers pl subjective pronoun)
díl lesser yellow legs
de what
déna what did you say (FTYK)
dénia (AVK)
deínia (older forms of devaínia déna)
deǫ́tc'i? old person cf.dǫ́dji?
deviá? door
-deniá son-in-law (daughter's husband, woman speaker)
denátłǫ wet snow cf.
dedzą́ loon
dets'át sucker fish
détc'a white fronted goose
déja? snow on spruce boughs
détr'a?djak swamp cranberry
détr'a? crow, raven
-déɣan body
detłą? book, paper
detłátą́ pencil
detł'á fish trap (drag net)
deládzal spruce cone
-da blood (person) cf. tc'ekǫ́ animal blood
dǫ́ fowl, chicken
daigú? maggot cf. gų? worm
daántłǫ wet snow cf.denátłǫ
da?ǫ́ axe
-dádzal boy's penis cf. -ðo penis
datsó mouse
datsótrin? rice (mouse excrement)
dats'án duck
dazó 2nd largest bull caribou

dazotsó young bull caribou
dǫ́djiʔ old person cf. deǫ́tc'iʔ
datcán wood, stick, stump, tree
datcán gwitrá shoes cf.tan gwitrá, gwitrá
dacú dry (adj)
dajáh shaman
-dak to shoot (arrow)
-dak to choke
dak'iá rock ptarmigan
daɬiʔ soap
dǫ four
docó towel
dor door
dúleʔ maybe
-tí uncle (father's brother)
-tiʔ father
tiʔiá father
tiʔǫ́ father
-tį́ thick (adj)
-tį (Ø) to be thick
tík three, three times
-tín ten
-tín (perf) to teach cf. -tán to teach (pl),-tia
-tin (ɬ) to trap fish cf. -tin (ɬ) to handle(Class II)
-tin (Ø) to be in place (Class II)
-tin (ɬ) to put, handle (Class II)
-tia (perf) to find out
-tiąʔ to teach each other cf. -tán; -tan
tiąxít deep
te- water (incorporated form) cf. teɣǫ́ beach
teɣǫ́ beach
teibrigóh to tape record
teíbrigordah tape recorder
-tá above
-tǫ (ɬ) to hold
taí hill
tǫ́ trail
tǫ́ gwindjík trail, road
-tǫ́ smooth (surface)
taitas Titus
tǫ́tsál canoe paddle (small)
-tán (l) to eze (water)
-tan, -tín, -tca (l) to teach one person
-tán (l) to teach several persons cf. -tiąʔ; -tia
taniá thin ice on creek
tan gwitrá shoes cf. datcán gwitrá; gwitrá
-tal to bloom
tǫ́ dark, night
-t'í (Ø) to cut, scrape
(ná)t'it hip
-t'é above cf. ot'é
-t'e (Ø) to fly cf. tc'it'e wing
-t'aí (d) to come to a lying position (t' < d +ʔai)
-t'ai to flow fast (creek)
-t'aí to rub
-t'ǫ́ (ɬ) to split
-t'aí sweet
-t'ai (Ø) to be sweet
-t'aí power
t'aví canvasback duck
-t'an (Ø) to stick
-t'án (perf) (ɬ) to hit with open hand, slap
-t'ak (d) to throw (Class V) (t' < d + ʔak)
-t'ó to wrap up
-t'ok to lick
-t'ok woman's breast
-t'oktsį nipple
-t'ú to butcher
dǝ́á mountain
-dǝ́ák sand cf.
tǝ́á ground squirrel
-tǝai to dive
-tǝai to pierce
-tǝǫ́ flesh cf. -tǝǫ́ fat
-tǝǫ́ fat (person)
-tǝak to throw (Class I)
-tǝ́ák to hit with (Class I)
-tǝ́ák all
-tǝ́ál anus
-tǝ́ó brown, yellow (as for brown bear) cf. atsó

-tθ'ai to scrape, to remove flesh from skin
-tθ'an? bone, leg
-tθ'átθ'ai? buttocks
-tθ'ak, -k'ɬ́, -tθ'ák to hear, understand (Ø)
tθ'aktr'atsín bald eagle
θetá portage
θáɬ trousers
-ða to be young
-ðá (Ø) warm, hot (weather, objects, etc.)
-ða (Ø) to be warm, hot (weather, objects, etc.)
-ða (ɬ) to be warm (person)
-ða? skin, hide
-ðaí to fall forward
-ðán, ja?, -ðan (Ø) to want, to like
-ðát dead (adj)
-ðat to be dead
-θat (ɬ) to fight
-ðat liver
-ðát to be standing
-ðat to come to a stand
-ðák to kick
-ðak to blink
-ðat (Ø) to think
-ðo penis
-dzit (Ø) to whisper
-dziréɬ'a? sinew in wrist
-dzík (Ø) lightweight
-dze? ear
-dzá (Ø) to dance
dzą here cf. zą; za
-dza toward
dzán muskrat
-tsí, -tsą́ɬ, -tsia to make
-tsi -tca (AVK)
-tsi, -tsai,-tsia
-tsi -tca (FTYK)
(also many other uses in combination with prefixes, e.g. bury, dig, pick,sell, whittle, tell story)
-tsí big (adj)
-tsi to be big
-(nin)tsí nose
-tsí grandfather
-tsín to rain
-tsin to smell, stink
-tsin (ɬ) to smell (trans)
-tsík red (adj)
-tsik to be red
-tsik rib
tsíɬ snowdrift
-tsit (ɬ) one object hangs cf. -?il
-tsit (ɬ) (perf) to give (Class III) cf. -?ę (any Class) -?ąɬ (Class I)
-tsia (fut) to make cf.-tsí
-tsia? upper thigh muscle
-tse (ɬ) to yawn
tse beaver
-tsét'it pocket
tsegí young beaver cf.-gí
-tsą́ɬ; -tsąɬ (perf) to make cf. -tsí; -tsi
-tsą́ɬ (ɬ) to get revenge
tsaiya? ice crystal snow
-tsan? vagina
-tsál small, few
-tsal (Ø) to be small
-tsó brown, yellow (as for brown bear) cf. -tθó
-tsu (Ø) to be in place (CLASS V)
-tsu (ɬ) to put (Class V)
-tsų́ grandmother
tsu feather
-tsu? vwins
ts'ivi spruce, forest, timber
ts'ít porcupine
-ts'it (Ø) to lie (falsehood)
-ts'ik large intestine
-ts'ík, ts'ik (ɬ) to be sick, hurt, hungry
-ts'ík narrow
ts'é ground hog
ts'édit tobacco
ts'ediki? pipe (tobacco head)
ts'egí young ground hog cf.-gí
-ts'ą? how
-ts'ą́ɬ side
-ts'an from (PP), since (PP)
-(nín)ts'at forehead
ts'at'ík heavy shirt
ts'ats'ahéts'ınekwą́ɬ seven

se 'C '(the letter)
seven seven
są́? star
sų́gąį? sugar cf.cų́gąį?
spuntsál teaspoon
-zą́ good (adj)
-zą (Ø) go be good
za there (near you) cf.dzą
-zǫ́ bad (adj)
-zǫ (Ø) to be bad
djį́ this (near me)
-djí (ɬ) to be empty
-djí where
-dji maybe
-dji to gather
-dji? with (accompany)(PP)
djinín sharp (adj)
djinrú housepost
djídi what (thing)
-djit to be new
djitsí iron, hard rock
djítci datcántia coffin
djiji?ík shirt
-djik to take back
djitɬ'u? pitch, sap
djiɬák one, once cf.?iɬák
djiɬę́ one person (conserv)
djiɬawatín ten
djiɬónli? five
djémis James
-djá to differ
-dja friend
djai why (also:djahai; zai)
djan John
-dját old, worn, rotten
-djat (Ø) to be old, worn
-dját (Ø) to be scared
djatcó apple cf. dják
djátθąį animal (for food) cf. -tθąį flesh
djago 4th largest bull moose
dják berry, fruit, blueberry
djatɬ'ó blue, green cf.-tɬó
djaɬ fish hook cf. -tcal
djáɬtɬ'a fishing line
djaɬxók young bull moose
-djokit navel
dju who
-djú to vomit
-dju younger sister
-dju niece (brother's sister)
djúde who cf. de what
djuk now
-tcį (ɬ) to sleep cf.-tcį to handle (Class III)
-tcį (ɬ) to put (Class III)
-tcį (ɬ) dead (adj) animal
-tcį (ɬ) to be dead
-tci? (ɬ) (cust) to put (Class II)
tcí stone, rock (AVK) cf. kí (FTYK)
-tcí grandson
-tcí? daughter (man speaker)
tcívia fish net
tcítin dip net
tcidzú mink
tcítsi? tail
tcitsál bird
tcíjin golden eagle
-tcíkąį? son-in-law (daughter's husband, man speaker)
tcíkat bed
-tcá (ɬ) to wash, soak, to spill water cf. gutcá Ft. Yukon Flats, 'flooded place', -trá, wet
-tcá younger brother
tcá Northern flicker
-tca (fut) to make (casual speech variant of -tsia, see -tsí; -tsi
-tca (ɬ) to tie
-tcá to count
-tcá wide (adj)
-tca (ɬ) (Cust) to put (Class V)
-tca to float cf. -tca to wash
-tca (fut) to teach cf.-tan
-tca? tongue (AVK) cf.-kia? (FTYK)
tcaváɬ toboggan

tcán again
-tcán too
tcatsíl small needle
tcáɣo? egg
-tcal fish hook cf. djaɬ
-tcó big (suffix)
tcų water
tcųtiá cup
tcųtcó ocean ('big water')
tcųtcové ocean beach
tcųninðа xąįląį́ hot spring
-tc'i (cust) to put, to handle (Class III)
-tc'i (ɬ) to live, be in a place
tc'í mosquito (AVK) cf. k'í, k'idjól (FTYK)
tc'idjól mosquito
tc'iyat'ók cow caribou that can bear calves
tc'ivédze? biscuit
-tc'ín people
tc'idéθa abomasum
tc'ít'e wing feather cf.-t'e
tc'ít'e wing
tc'ídji? horn, antlers
tc'itceŗí April
tc'ítc'uk the other way
tc'ijinŗí March
tc'íjak downward (AVK) cf. k'íjak (FTYK)
-tc'íl (perf) several go cf. -?o
tc'irindjá pintail duck
tc'édąį fish spear
tc'edzits'ík hornet
tc'ekąį́ blood (animal) cf.-da
-tc'a to be (copula)
-tc'á to tear (Ø)
-tc'a,-tc'a, --, (ɬ) to cook, roast, fry
tc'ahasík grasshopper
tc'andá more, much
tc'ándja? old person
tc'ándja January
tc'átan high fog
tc'atál willow grouse
tc'át'an? leaf
tc'at'ó nest
tc'atsál December
tc'átr'aɬ ice fog
tc'ókot átsi to sell cf.-kot
tc'axwétcints'ik hawk
tc'aradzá to dance
tc'aradzajé dancehouse
tc'aratθá needle (moose skin)
tc'arókotjé store
tc'aróxwejé
tc'uvátc'u bark of tree
tc'unt'ai hat'ínt'ai shaman
cį́ I (1st pers sg subjective pronoun)
cí? brown bear
ci food
-ci to snow
cín springtime, summer
cits'ąį́ right side cf. tɬots'ąį́ left side
cé- 1st pers sg possessive pronoun prefix
cą́ my brother-in-law (wife's brother) cf. -ąhą́
ca footbone
ca?aí semi-palmated plover
cat scar
catsó bank swallow
-cǫ? prohibitive suffix
coŗąį́ black bear
-col to blow
cu? slow, slowly
cúgąį sugar cf. súngąį
cpuntsál teaspoon cf. spuntsál
-jí (ɬ) to dress, undress
-jí; -ji (perf) one person goes cf. -ha
jí? louse
-jit in, inside
-jik to bring
jík 3rd pers sg pronoun, also: that, there
jiknąį́ they cf.-nąį́ pl suffix
jé house
-jé below cf. ojé
jeyá Wilson's snipe
jekát sky
jek'ó cloud

-já a little rotten
-ja? (ɬ) (perf) to like, want cf. -ðán
jạ maybe
já snow cf. tanyá/ tsaíya?/ déja?
-jak (Ø) to breathe
-jak below
jó wolf
jotsál coyote (small wolf)
-jú small (suffix)
-jú son (woman speaker)
-drí light
-drí spider cf. gwidedrí
-dri? heart
drín light, day
drindetít week
drínjit Sunday
drintɬ'é Monday
drintɬ'é nekwạ́ Tuesday
drintɬ'é tík Wednesday
drintɬ'é dǫ́ Thursday
drintɬ'é djiɬónli? Friday
drintɬ'é nik'itík Saturday
drindlán tc'ará?a lunch
-drítsi? chest
-dríl thin
-dríɬt'ok lungs
trí three
-trịn? excrement cf.tr'a?á
-tré (Ø) to cry, howl
trelúk small white ocean fish
tra land otter
-trá (ɬ) wet cf. -tcá to wash, soak
tra firewood, logs
-trat to scratch
tr'í bark (of tree) cf.k'itr'í
tr'í canoe
tr'itsál small canoe
tr'itcó boat (big)
tr'inín child
tr'inintsál baby
tr'índai? blackfly
tr'índja woman
tr'índja wife
tr'índa sweat cf. -ða
-tr'ít work
tr'a?á excrement cf. trin?
-tr'ai (ɬ) to blow (wind)
tr'andú devil
tr'agịhíjé church
tr'akạ́ bitter
tr'aɬt'ók small willows
-tr'ó kidney
ḉí knife
-ṛi, -ṛi, -ṛi (l) to hunt
-ṛị (perf) to give a name
-ṛik saliva
-ṛé to spit
ḉe sun, moon
ḉévia? rainbow
ḉenán month
ḉá sheefish
-ṛak belly
-ṛál to bark, yell, shout -rál
ḉạ́ dirty object
-ṛạ́ (Ø) to be black, dirty
ḉu robin
-gí child, young one
-gin arm
git glacier
gé rabbit
gexaídza besides
géɣwa? macaroni ('rabbit leg'--old form)
-gạ́ to fight
-gạ dry
-gạɬ thin person
-gạ claw, nail
-gạ́ white
-gál, -gál, -gál (l)(AVK)to run
-gal, -gal, -gal (l)(FTYK)
gó- 3rd pers pl possessive pronoun prefix
go- prefix indicating place, weather, time, etc.: also gu-, gwi-
gorạcí } meadow
gwạ·cí }
gwintɬ'ó much
gudedrí } spider
gwidedrí }

gutc'ín peoplé
gwitc'ín
gwitrá mocassins
gwídlan steep place
gutcá Ft. Yukon Flats
gwitcá
gwitɬ'e xaí next year
guluɣí May
góga? that's all right
-gón short (adj)
-gon (Ø) to be short
-gón shallow (adj)
gonjí vegetable
-got knee
-gót (Ø) to stab, spear(AVK)
-got (FTYK)
-gót dull
-got to hit with fist
-gótc'a clothing
gų? worm
gų
-ki? head
kí rock, stone (FTYK) cf. tcí (AVK)
kí iron cf. kí
kivitr'í flint
kiníki? grindstone
kinú canoe
kitc'a?án cave
kítθak gravel
kítɬu? ashes
-kiɣąį brain
-kia? tongue (FTYK) cf. -tca? (AVK)
kiaɣąí Bonaparte's gull
-kwa (Ø) to ride in a canoe
-kwa negative suffix
-kwąį two cf. nekwąį
-kwaí pile, heap
-kwai to vomit
-kwai? feet, foot
kwaík'it town
kalt'ú yellow pond lily
-kąį sweet
-kai (ɬ) to sew
-kai (ɬ) to pack, carry
-kąį? husband
-kąį (Ø) to be in a place (Class IV)
-kąį (ɬ) to handle (Class IV)
-kat on (top of)
-kat (cust) (Ø) to handle (Class IV)
-(na)kát territory
-kó (Ø) to cough
kón? dirt house, camp
kón?za? campfire
kóntcų whiskey (fire water)
-kot to buy, pay, sell
k'í mosquito (FTYK) cf.tc'i
k'idjól mosquito
k'idjóɬ mosquito
-k'i (ɬ) to make a fire cf. -k'a? to burn
-k'į (ɬ) to listen cf. -tθ'ak
k'i? arrow
k'índak East
k'int'eviá door cf. devia
k'idocó dish towel
-k'ít to spill
k'it dish
k'íjak downward direction (FTYK) cf. tc'íjak (AVK)
k'ídak upward direction
k'itr'í birch bark, canoe
-k'é to be fat
-k'é to shoot (gun)
k'edjí something
k'édjit new, clean, young
k'et'aí yesterday
-k'á?, -k'ín, -k'ín (Ø) to burn cf. ak'án fire
k'andjík mountain creek
-(e)k'aí mother's sister
k'aitɬák small willow
k'ó alder
-k'ó neck
-k'ó (Ø) cold, to be cold
k'ǫ valley creek
-k'u to suck
-xi to be crazy
-ɣít mouth
-xe (ɬ) to fool, deceive
-ɣwa (Ø) to pack, carry
-ɣwa? leg

-xwaí sister-in-law (wife's sister)
-xwɫ́ɫ (ɬ) to kill, to fight -xwąɬ
-xwaí (ɬ) smooth
-xwai (ɬ) to thaw, melt
xwąɬ́dak'ą́? candle
-ɣe? hair
-ɣa (Ø) tó fall (Class II)
-xa (ɬ) to throw (Class II)
xadétsik young cow moose
xai root
xaitiá basket
xaí winter
xaí year
xaídza autumn
-ɣąɬ́ vicinity
xán fast
xáɬtai round whitefish
xal tθ'an? crippled leg
-xal (ɬ) to open (intr.)
-ɣo(FTYK) to fall down -ɣǫ́ (AVK)
-ɣo round
-ɣo? testicles
-ɣo? teeth
-ɣón (Ø) to growl
-xón (ɬ) to fight
-dli to be in a place (Class VI)
-dlí to sing
(nán)dli' hand
-dla to laugh
dlák Alaska red squirrel
-dlaí round (ball)
dlotθá shrew
dlogwatθá
-tɬit to be spoiled
-tɬat to spill
-tɬ'i? hip region
-tɬ'it to fall (CLASS VI)
-tɬ'it (ɬ) to throw (Class IV or VI)
-tɬ'a to braid
-tɬ'a rope
tɬ'atr'án? dragonfly
-tɬ'ák to jump
-tɬ'ó green, blue
-tɬ'ó? gall
-tɬ'o grass
tɬ'ots'ąɬ́? left side cf. cits'ąɬ́ right side
tɬ'okát grassy open place
tɬ'ótcakát flat (ground)
-tɬ'u to weave
tɬ'u horsefly
-lį many, plenty, lots
-li to put (Class VI)
-li to become
-ɬi (ɬ) to put (cust) (Class VI)
-li to swell up, bulge
ɬíak'ą́? candle (Old John word)
ɬiá very
ɬíc kindling wood
-lia (Ø) to dream
-lia (ɬ) to carry (in arms)
-lik dog cf. ɬąɬ́
-líl to drag
-lę́ many, plenty, lots
ɬetiá bottle
ɬát smoke
ɬąɬ́ dog
ɬąɬtcó horse ('big dog')
ɬu ice
ɬu? dirt
ɬu?atr'aí́ dust
ɬu?ohotán frozen dirt
ɬutc'a? bread
ɬutr'á?a flour
ɬutc'ánt'at mud
ɬúk fish
ɬuktcó king salmon
ɬúk'ų? fish egg
ɬútɬi fish tail
ledí tea
ledítiá teapot
lerą́ money lerá
lerądátsik gold
lesíl salt
lekévar paper (old form)
læsyir last year
lokocok'é bacon
laísen license

V.7 English-Kutchin word and stem list

'A' a·
abomasum (part of the stomach of moose or caribou) tc'idéθa
above ot'é; gwatá
again tcán
airplane érblein
Alaska blackfish vitcatsík
alder k'ó
alive -ndai
all datθák; héɬok
all right góga?
almost handjí
also olso
always hídza?
animal (for food) djátθąɬ
(game) nín
anus -tθál
apple djatco
April tc'itceɽí
arch -viá?
area -ɣąɬ́
arm -gin
arrow k'i?
as for -aí
ashes kítɬu?
August vanan di?ilí
aunt (mother's sister) -ek'aí
autumn xaídza
axe da?ąɬ́
'B' be
back (lower) -nant'íjak
bacon lokocok'é
bad: (adj) -zǫ
to be bad -zǫ́
bank swallow catsó
bark (verb) -ɽál
bark of tree tr'í; tc'uvátc'u
birch bark k'itr'í
spruce bark ?atr'í
basket xaitiá
be: to be in a place
Class I -?ąɬ (Ø)
Class II -tin (Ø)
Class III -di,-dí,-diá(d)
Class IV -kąɬ (Ø)
Class V -tsu (Ø)
Class VI -dli
Existential -tc'a (Ø)
Attributive -tc'a
beach teɣąɬ́
ocean beach tcutcové
bear: black coɽąɬ́
brown cí?
beard -dínɣe?
beaver tse
young beaver tsegí
become -li
bed tcíkat
belch haintr'aí
belly -ɽak
below ojé; -jak
berry dják
besides gexaídza
big: suffix -tcó
adj -tsí
verb -tsi
birch ?at'ó
bird tcitsál
biscuit tc'ivédze?
bitter tr'akąɬ́
black aɽąɬ́
blackfly tr'índai?
blink -ðak
blood: animal tc'ekąɬ́
man -da
bloom -tal
blow -col
wind blows -tr'ai (ɬ)
blue -tɬ'ó
blueberry dják
blurred avé
boat tr'itcó
body-déɣan
bone tθ'an?
book, paper detɬa/detɬa?
bottle ɬetiá
braid -tɬ'a
brain -kiɣąɬ
bread ɬutc'a?
break (perf) -nąɬ (ɬ)
breakfast van tc'ará?a
breast -t'ok/-ma?
breathe -jak (Ø)
bring -jik
brother: older -ondé
younger -tcé
-in-law (wife's brother) -cǫ́/-ahǫ́

brown, yellow -tθó/-tsó
bulge, swell up -li
burn -k'á?,-k'ín, -k'ín (Ø)
butcher -t'ú
butterfly nenohot'é
buttocks -tθ'átθ'ai?
buy -kot
'C' se
candle xwąłdak'ą?
  Old John word łíak'ą?
canoe tr'í/kinú
  small tr'itsál
canvasback duck t'aví
caribou: general vadzaí
  2nd bull dazó
  young bull dazotsó
  cow with calf tc'ayat'ók
caribou skin house neviá?
carry: Class I -?ak (Ø)
  in arms -lia (ł)
  on back (pack)-γwa (Ø)
cat nindjijú
cave kitc'a?án
chest -drítsi?
child tr'inín
  young one -gí
chin -nídi?
choke -dak
church tr'agįhíjé
claw, nail -gąį
clothing gótc'a
cloud jek'ó
coat nerátsu
cold adj -k'ó
  verb -k'ó
come, return-dík, ---,-dík(ł)
cone deládzal
cook -tc'a,-tc'a,--(ł)
copulate -?in
cough -kó (Ø)
count -tcá
cow ?ak'í
coyote jotsál
cranberry: bush nátłat
  swamp détr'a?djak
crawl -?á (ł)
crazy -xi
creek: mountain k'andjík
  valley k'ǫ

crippled leg xal tθ'an?
cry -tré (Ø)
cup tcųtiá
cut, scrape -t'í (Ø)
dance -dzá (Ø)
dancehouse tc'aradzajé
dark tǫ́
daughter: man speaker -tcí?
  woman speaker -edzí?
day drín
dead: adj -tcį (ł)
  adj -ðát
  verb -ðat (Ø)
December tc'atsál
deep tiąxít
devil tr'andú
differ -djá
dipnet tcítin
dirt: frozen łu? ohotán
dirt house kón?
dirty: adj çąį́
  verb -ɾąį (Ø)
dish k'it
dive -tθaí
do: also, to want -?in
doctor dindjícinilí
dog łąį́
  : possessed form -lik
don't -cǫ? /-nę
door k'int'eviá/deviá?/dor
down,downward tc'íjak (AVK)
  k'íjak (FTYK)
drag -líl (Ø)
dragnet detł'á
dragonfly tł'atr'án?
dream -lia (Ø)
dress, undress -jí (ł)
drink -ní, -nį?, -ndja (d)
dry -gąį/dacú
  meat nilįgąį
duck dats'án
dull -gót
dust łuatr'aí
eagle: bald tθ'aktr'atsín
  golden tcíjin
ears -dze?
East k'índak
eat -?a,-?al,-?a (Ø)
egg tcáγo?

eight nik'idǫ
  eight o'clock etɬák
empty -djí (ɬ)
excrement tr'a?á; trin?
eye -(ní)nde?
fall: Class I -nąɬ́ (Ø)
  Class II -ɣa (Ø)
  Class III -nąɬ (Ø)
  Class IV -nąɬ (Ø)
  Class V -ndak (l)
  Class VI -tɬit
fall forward -ɣó; -ɣǫ́; -ðaí
family fámli
far nɬjít; nijít
fast xán
fat: noun tc'ik'é
  adj (person) -tθąɬ́
  adj (animal) ?ak'í
father -ti?
  father-in-law (wife's father) -yeɣan
fear -dját (l); -?é
feather tsu
  wing feather tc'ít'e
February vegwá·ðat
feed -?a (ɬ)
feet -kwai?
few -tsál
  verb -tsal
fight -xwąɬ́ (ɬ); -gąɬ́; -xón(ɬ)
  -θat(ɬ)
find out --, -tia
finish -ndjík
fire ak'án
  campfire kón?za?
  make a fire -k'i (ɬ)
firewood, logs tra
fish: noun ɬúk
  verb -?ín, --, -?ia
fish egg ɬík'ų?
fish line djáɬ-tɬ'a
fish net tcívia
fish (small ocean) trelúk
fish spear tc'édąɬ
fish tail ɬútɬi
fish trap detɬ'á
five djiɬónli?; ?iɬakónli?
  faí
flat: grassy place tɬ'ótcakát
  Ft. Yukon area gutcá; gwitcá
flesh -tθąɬ́
flint kivitr'í
float -tca
flour ɬu tr'á?a
flow: fast -t'ai
  slowly -?ok (ɬ)
fly: verb -t'e (Ø)
fog: high tc'átan
  ice tc'átr'aɬ
foggy netc'agwahé
food ci
fool, deceive -xe (ɬ)
foot bone ca
for -endjít
forehead -nínts'at
forest, timber ts'iví
forty fórdi
four dǫ; for
fowl dąɬ
fox negǫ
Friday drintɬ'e djiɬónli?
friend -dja
from -ts'án
freeze -tán (l)
Ft. Yukon Flats gutcá; gwitcá
gall -tɬ'ó?
gather -dji
give: general -?ę
  Class I -?ąɬ, --, -?ąɬ (ɬ)
  Class III -tcɬ, -tsit (ɬ)
give birth -?i
glacier git
glacier deposit (flour-like) yetcalu?
go: one person -há,-jí,-há(AVK)
  -ha, -ji, -ha (FTYK)
  several -?o,-tc'íl, -?al(Ø)
  imperative xán
god díti? k'egwá·ðat
gold lerądátsik
good adj -zɬ́
  verb -zɬ (Ø)
goose: white fronted détc'a
grandfather -tsí
grandmother -tsų́
grandson: man speaker -tcí
  woman speaker -tcí
grass tɬ'o
grasshopper tc'ahasík
grassy open place tɬ'okát
gravel kítθak
green -tɬ'ó

grey avé
grind -ho
grindstone kiníki?
ground nán
ground hog ts'é
growl -ɣón (Ø)
gull, Bonaparte's kiaɾɋɋ́
gun dínk'e
gunpowder dink'éko
hair -ɣe?
hand -(nán)dli?
hang: one object -tsit (ɬ)
several objects -?il (l)
hate -?e
have -?i,--, -?ia (Ø) (FTYK)
-?ɋ́ (AVK)
hawk tc'axwétcints'ik
he jík
head -ki?
hear -tθ'ak,-k'ɋ́,-tθ'ák (Ø)
heart -dri?
heavy -dí
verb -di (Ø)
here dzą
hers vé-
hide, verb -?í (l)
hill tai
hip -nát'it
hip region -tɬi?
his (hers,its) vé-
hit: with open hand --,-t'án (ɬ)
with fist -got
hold -tą (ɬ)
hook (fish) djaɬ; tcal
horn, antlers tc'ídji
hornet tc'edzits'ík
horse ɬąɋtcó
horsefly tɬ'u
hot, warm (object) -ðá
verb (object) -ða (Ø)
verb (person) -ða (Ø)
hot spring tcɥninðaxąɋlą́ɋ́
house jé
housepost djinɾú
how níts'ą?
hungry hángri
hunt -ɾi, -ɾi, -ɾi (l)
hurt hirt
husband -kąɋ?

I cɋ́
ice ɬú
ice crystal snow tcaíya?
ice on creek, thin tanyá
Indian dindjijú
inside -jit
intestine: large -ts'ik
small -nindó?gɥ?
iron kí; djitsí
Isaac aízík
island (of timber) ndjú
its vé-
jackfish iltín (FTYK),altín(AVK)
?altín (AVK)
James jémis
January tc'ándja
jaw -nitθ'an
John jan
July vananets'antc'ąjɋ́
jump -tɬ'ák
June vanantc'íɣo
kick -ðák
kidney -tr'ó
kill: (sing) --,-xwąɋ́ (ɬ)
(plural) --,-ðat (ɬ)
kindling wood ɬíc
knee -got
knife çí
know -ndai,--, -ndai (d)
lake ván
lake fish neɣán
last year hecín; læsyir
laugh: verb -dla
leaf tc'át'an?
leave a remainder -nɋ́
left side tɬ'ots'ąɋ́?
leg -ɣwa?
lesser yellowlegs díl
license laísen
lick -t'ok (d)
lie on back -t'aí (d)
lie down --, -?e, -?é (ɬ)
-?ąɋ́
lie: tell falsehood -ts'it (Ø)
lift -ndji
light -drí
light, day drín
lightweight -dzík (Ø)
lips -(ndé)va?
listen --, -k'ɋ (ɬ)

liver -ðat
live -tc'i;-tc'a
logs tra
long: adj -ndjá
verb -ndja (Ø)
long time níyuk
loon dedzą́ɬ
louse jí?
lunch drindlán tc'ara?a
lungs -dríɬt'ok
lynx nindjí
macaroni géɣwa?
maggot dąɬgú?
make -tsi, {-tsą́ɬ, -tsia} (ɬ)
{-tsi, -tca}
(FTYK)
-tsí, {-tsą́ɬ, -tsia} (AVK)
{-tsi, -tca}
mama mama
man dindjí
many -lį; -lę
March tc'ijinrí
May guluri
maybe dúle?; -dji; jạ
meadow gorącí; gwą·cí
meat nilí
milk -ma?
mink tcidzú
mocassins gwitrá
Monday drintɬ'é
money lerą́
month çenán
moon çé
moose: general dindjík
young bull djałxók
third largest didjí
fourth largest djago
young cow xadétsik
more, much tc'andá
morning van
mosquito k'í; k'idjól (FTYK)
tc'í; tc'idjól (AVK)
moss niá?
mother nę?ę́
mother-in-law (wife's mother) -ótr'i
mountain dða
mouse datsó
mouth -ɣít
mucus dindjítɬ'u?
much gwintɬ'ó
mud ɬutc'ánt'at
muscle, upper thigh -tsia?
muskrat dzán
my cé-
name: noun -óri?
verb -rį́ɬ (perf)
narrow -ts'ík
navel -djokit
near nagón; -ɣą́ɬ
neck -k'ó
needle: small tcatsál
for moose skin tc'aratθá
for beads nagą́ɬtcatsál;
nagą́ɬdjatsál; nagą́ɬtθatsál
needles: of tree ágat
nephew -ejí
nest tc'at'ó
new -djit
next year gwitɬ'e xaí
niece -dju
night tǫ́
nine vontsanegónzaizetín
nipple -t'óktsį
no akwa; nǫ; no?
North uét'i?
Northern flicker tcá
Northern lights yekaí
nose -nintsí
not -kwa
November diviri
now djuk
ocean tcųtcó
October vadzairí
old: adj -djá́t
verb -djat (Ø)
old man tc'ándja?
old person dą́djí?; deą́tc'i
on (top of) -kat
once djiɬák; ?iɬák
one djiɬák; ?iɬák
one person djiɬę́
open -xal(ɬ); oben
or or
other way tc'itcuk
otter tra
our dí-
pack -kai (ɬ)
paddle: noun tą́ɬtsál
verb -kwa (Ø)
papa baba
paper lekévar
pay -kot
pencil detɬátą́ɬ

penis -ðo
boy's penis -dádzal
people gutc'ín; gwitc'ín
person dindjí
piedmont varęį
piedmont creek (Arctic Village) varęįk'ǫ́
pierce -tθai
pile -kwaí
pintail duck tc'irindjá
pipe ts'edíki?
pitch djitɬ'u?
play -?ín
plover ca?aí
pocket tsét'it
pond lily kalt'ú
porcupine ts'ít
portage θetá
power -t'aí
pray -ndji
ptarmigan, rock dak'iá
pull -ndak
push -di
put: to handle Class I -?ęį (ɬ)
Class II -tin (ɬ)
Class III -tcį (ɬ)
Class IV -kęį (ɬ)
Class V -tsu (ɬ)
Class VI -li
(customary forms)
Class I -?ak (Ø)
Class II -tci?
Class III -tc'i (ɬ)
Class IV -kat (Ø)
Class V -tca (ɬ)
Class VI -ɬi (ɬ)
rabbit gé
rain atsín
verb -tsín
rainbow ǫévia?
raven, crow détr'a?
red -tsík
verb -tsik (Ø)
return -dík,--,-dík (ɬ)
revenge -tsęį́ (ɬ)
rib tsik
rice datsótrin?; rais
ride in canoe -kwa
right side cits'ęį́
ripe díniri?
river han
road, trail tęį gwindjík
robin ǫu
root xai
rope tɬ'a
rotten -já
round -?é; -ɣo; -dlaí
rub -t'aí
run -gál, -gál, -gál (ł) (AVK)
-gal, -gal, -gal (FTYK)
saliva -rik
salmon: king ɬuktcó
winter dog netɬí
salmonberry nákal
salt lesíl
sand nedðák
Saturday drintɬ'e nik'itík
say -niǫ́, -niǫ, -niǫ? (AVK)
-ndja (-na) -ndja (FTYK)
(-nįǫ́)
scar cat
scrape (with bone) -tθ'ai
scratch -trat
seagull vų́
seal: animal nedjúk
see, look -?ín,-?iǫ?, -?ia (ɬ)
seeds vándi?
sell tc'ókot átsi
sémen -negwíhęį
September dindjikrí
seven ts'ats'ahets'ǫnekwęį́; seven
sew -kai (ɬ)
shallow -gón
shaman vat'í?i; tc'unt'aihat'ínt'ai; dajáη
sharp -nín; djinín
sheefish ǫá
sheep diví
shirt: light djiji?ík
heavy ts'at'ík
shoes datcan gwitrá; tan gwitrá
shoot (with): gun -k'é (ɬ)
arrow -dak
short: adj -gón
verb -gon (Ø)
shout, yell -rál
shrew dlotθá; dlogwatθá

sick, hurt -ts'ík, -ts'ik
side -ts'ą́ł
sinew in wrist -dziréłʼaʔ
sing -dlí
sister: older -edjí
younger -dju
sister-in-law (wife's sister) -xwaí
sit -diʔ, -di, -dia (Ø)
six nikʼitík
skin, hide -ðaʔ; nínðaʔ
sky jekát
slave uˑndjík
sleep -tcį (ł)
slow cuʔ
small: adj -tsál
verb -tsal
suffix -jú
smell -tsin (ł)
smoke łát
smooth -xwaí;-tą́ł
sneeze -ʔó (ł)
snow já
wet denátło; daántło
verb -ci
on spruce bough déjaʔ
drift tsíł
snowshoes ʔai
soak -tcá
soap dałiʔ
something kʼedjí
sometime nakʼódjiʔ
someone's dí-
son: man speaker -índjiʔ
woman speaker -jú
son-in-law (man speaker) -tcíkąįʔ (woman speaker) -deniá
sore: noun hatcʼák'it
South uéndjiʔ
sparrow neˑkʼík
speak -ndak,--, -ndak (ł)
spear: verb -got (Ø)
spider gudedrí; gwidedrí
spill -tcá; -kʼít; -tłat
spit -ré
split -tʼą́ł (ł)
spoiled -tłit
spoon spuntsál; cpuntsál
springtime cín
spruce tsʼiví
squeeze -di (Ø)
squirrel: red dlák
ground tθá
stab -gót; -kok (ł)
stand: (moment.)-ðat
(continuative) -ðát
star są́ʔ
steep place gwídlan
step on -ʔu
stick: of wood datcán
stick: verb -tʼan (Ø)
stomach -vat
stone, rock kí (FTYK) tcí(AVK)
store tcʼarokotjé; tcʼaroxwejé
straight -ʔé; -ʔą́ʔ
strangle -ndjí
stump datcán
sucker fish detsʼát
suck -kʼu
sugar sʊ́gąįʔ; cʊ́gąįʔ
summer cín
sun çé
sunset netcʼaʔaʔaí
Sunday drínjit
swallow -nde
sweat trʼínða
sweet: adj -ką́ł
adj -tʼaí
verb -tʼai (Ø)
swell up, bulge -li
swim: animal -viaʔ
person -vík
table vokaʔá
tail tcítsiʔ
take back -djik
talk -hi,-heʔ, -hia (Ø)
tape record teibrigóh
tape recorder teíbrigorđah
teach: object sing. -tan, -tín, -tca (1)
object plural -tán
each other -tiąʔ
tea ledį́
teapot ledítiá

tear: verb -tc'á (Ø)
tears: noun -níndetcų
teeth -γo?
ten djiławatín; ?iławatín; -tín
territory -nakát
testicles -γo?
thank you masí?; masitcó; mací?; macitcó
that:far away jík
right there yahá
at that place ijik
thaw -xwai (ł)
their gó-
them, they jiknąí
there: far jík
by you jík
near you dzą; za; ó?at
they naxón
thick: adj -tį́
verb -tį
thin didríl
think -ðat
this djí
three tík; trí
three times tík
throw: Class I -tθak
Class II -xá (ł)
Class III -nąį(ł)
Class IV -nąį(ł)
Class V -t'ak (d)
Class VI -tłit (ł)
-xi
thunder netán
Thursday drintł'edǫ́
tie: verb -tca (ł)
tire: verb -ndak
Titus taitas
to: the place -?an
tobacco ts'édit
toboggan tcavałt
tomorrow níka; níkę
tongue -kia?(FTYK)-tca?(AVK)
toward dza
towel docó
town kwaík'it
trail tąį
trap fish -tin (ł)
tree łatcán
trousers θáł
Tuesday drintł'é nekwąí
two, twice nekwąí
uncle: mother's brother -e?í father's brother -tí
upward k'ídak
urine íłar
vagina -tsan?
vegetable gonjí
veins -tsu?
very łiá
vicinity -γąí
vomit -kwai; -djú
wagon vitłégedjįnedéda
want, like -ðán,-ja?, -ðan(Ø)
want, do -?in
wash -toá (ł)
water tcų; te-
we dixón
weave -tł'u
weasel utsąįvín
Wednesday drintł'e tík
week drindetít
West uénin
w t -trá (ł)
what (thing) djídi
what (did you say) de; déna; dénia; deínia; devaínia
when ndjindji?
where nídjuk
where -djí
whiskey kóntcų
whisper -dzit
white -gąí
whitefish, round xáłtai
whiteman vanotłít; ǫ́djit
who dju; djúde
why djai; djahai
wide -tcá
willow, small k'aitł'ák
willows in small group tr'ałt'ók
willow grouse tc'atál
Wilson's snipe jeyá
wind ?atr'aí
wing tc'ít'e
winter xaí
with: accompany dji?
instrumental ha
wolf jǫ́

wolverine nítra
woman tr'índja
woman, wife -ʔat
wood datcán
work -tr'ít
worm gɣ́ʔ; gɣ́
wrap up -t'ó
yawn -tse (ɬ)
year xaí
yell, shout -ɽál
yellow, brown -tsó; -tθó
yeah yea
yes ąhąʔ
yesterday k'et'aí
you: sing. nán
plural naxón
young: adj k'édjit
verb -ða
your: sing. né-
plural nohó-

VI. Footnotes

1. The fieldwork on which this paper is based was supported by a National Science Foundation grant to the Northwest Linguistic Project under the Pacific and Asian Linguistics Institute of the University of Hawaii, Laurence C. Thompson, Principal Investigator. I wish to thank Professor Thompson both for his financial support and for his encouragement in my Athapaskan work. I also wish to thank Professor Fang-Kuei Li for his encouragement and for the Sapir notes.

2. Kutchin spellings follow Sapir's notes except the following: for dɽ, tɽ, and tɽ' I have dr, tr, and tr'; for ɕ I have c; for g̱, k̲, k̲', and x̲ before [+palatal] I have g, k, k', and x.

3. See III.3 for further discussion of phonological conditions.

4. Forms are given throughout this paper in the order of imperfective, perfective and future. (A single form, unless otherwise marked, is given in the perfective.) Two speakers gave both forms (-tsąɬ and -tsi) remaining consistent with themselves only in tone.

5. [ñ] precedes [ia] in AVK and may be considered phonetically conditioned.

6. Recall the difficulties in the synchronic analysis of these fricatives. I have chosen the voiceless alternant as the underlying form.

7. There is some variability in the presence of initial glottal stops.

VI. Bibliography

DELATTRE, Pierre. 1966. Les modes phonetiques du francais. In: Studies in French and comparative phonetics. The Hague: Mouton and Co. pp. 9-13.

DRACHMAN, Gaberell. 1973. Some strategies in the acquisition of phonology. In Working papers in linguistics, No. 15. Ohio State University.

DYEN, Isidore and David F. Aberle. 1974. Lexical reconstruction: The case of the Proto-Athapaskan kinship system. London: Cambridge University Press.

FERGUSON, Charles F. 1964. Baby talk in six languages. In: Gumperz, John and Dell Hymes (Eds.) The ethnography of communication. American Anthropological Association Special Publication, Vol. 66, pp. 103-114.

GREGERSON, Kenneth J. 1973. Tongue-root and register in Mon-Khmer. Paper presented at First International Conference on Austroasiatic Linguistics. Honolulu, Jan 1973.

HOIJER, Harry. 1960. Athapaskan languages of the Pacific coast. In: Stanley Diamond (Ed.) Culture in history: essays in honor of Paul Radin. New York. Columbia University Press.

_____. 1974. A Navajo lexicon. University of California Publications in Linguistics, Vol. 78.

KIM, Chin Wu. 1972. Two phonological notes: a-sharp and b-flat. In: Michael K. Brame (Ed.) Contributions to generative phonology. University of Texas Press.

KRAUSS, Michael. 1964a. Proto-Athapaskan-Eyak and the problem of Na-Dene I: the phonology. IJAL 30.2:118-131.

_____. 1964b. Review of studies in the Athapaskan languages. IJAL 30:409-415.

_____. 1972. Na-Dene. In: T. Sebeok (Ed.) Trends in Linguistics in North America. Pre-publication copy, pp. 146-206.

LI, Fang-Kuei. 1933a. A list of Chipewyan stems. IJAL 7.3,4:122-151.

_____. 1933b. Chipewyan consonants. Bulletin of the Institute of History and Philology of the Academia Sinica, Supplementary Volume 1.429-467.

MCKENNAN, Robert A. 1965. The Chandalar Kutchin. Arctic Institute of North America, Technical Paper No. 17.

MORGAN, Lewis H. 1871. Systems of consanguinity and affinity of the human family. Smithsonian contributions to knowledge, Vol. 17.

MUELLER, Richard. 1964. A short illustrated topical dictionary of Western Kutchin. Summer Institute of Linguistics, Fairbanks, Alaska.

NELSON, Richard K. 1973. Hunters of the northern forest. Chicago: The University of Chicago Press.

OSGOOD, Cornelius. 1936. Contributions to the ethnography of the Kutchin. Yale University Publications in Anthropology, No. 14.

SAPIR, Edward. 1921. Language. New York: Harcourt, Brace and Co.

SCOLLON, Ronald. 1974. One child's language from one to two: the origins of construction. Working Papers in Linguistics, Vol. 6, No. 5, July-September. Department of Linguistics, University of Hawaii.